Vendor: Microsoft

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Case Study 1 - VanArsdel, Ltd (Question 1 - Question 8)

Overview

VanArsdel, Ltd. builds skyscrapers, subways, and bridges.
VanArsdel is a leader in using technology to do construction better.

Overview

VanArsdel employees are able to use their own mobile devices for work activities because the company recognizes that this usage enables employee productivity.
Employees also access Software as a Service (SaaS) applications, including DocuSign, Dropbox, and Citrix.
The company continues to evaluate and adopt more SaaS applications for its business.
VanArsdel uses Azure Active Directory (AD) to authenticate its employees, as well as Multi-Factor Authentication (MFA). Management enjoys the ease with which MFA can be enabled and disabled for employees who use cloud-based services.
VanArsdel's on-premises directory contains a single forest.

Helpdesk:

VanArsdel creates a helpdesk group to assist its employees. The company sends email messages to all its employees about the helpdesk group and how to contact it. Configuring employee access for SaaS applications is often a time-consuming task.
It is not always obvious to the helpdesk group which users should be given access to which SaaS applications. The helpdesk group must respond to many phone calls and email messages to solve this problem, which takes up valuable time.
The helpdesk group is unable to meet the needs of VanArsdel's employees.
However, many employees do not work with the helpdesk group to solve their access problems. Instead, these employees contact their co-workers or managers to find someone who can help them. Also, new employees are not always told to contact the helpdesk group for access problems. Some employees report that they cannot see all the applications in the Access Panel that they have access to. Some employees report that they must re-enter their passwords when they access cloud applications, even though they have already authenticated.

Bring your own device (BYOD):

VanArsdel wants to continue to support users and their mobile and personal devices, but the company is concerned about how to protect corporate assets that are stored on these devices.
The company does not have a strategy to ensure that its data is removed from the devices when employees leave the company.

Customer Support

VanArsdel wants a mobile app for customer profile registration and feedback.
The company would like to keep track of all its previous, current, and future customers worldwide.
A profile system using third-party authentication is required as well as feedback and support sections for the mobile app.

Migration:

VanArsdel plans to migrate several virtual machine (VM) workloads into Azure.
They also plan to extend their on-premises Active Directory into Azure for mobile app authentication.

Business Requirements

Hybrid Solution:

A single account and credentials for both on-premises and cloud applications Certain applications that are hosted both in Azure and on-site must be accessible to both VanArsdel employees and partners
The service level agreement (SLA) for the solution requires an uptime of 99.9%
The partners all use Hotmail.com email addresses

Mobile App:
VanArsdel requires a mobile app for project managers on construction job sites.
The mobile app has the following requirements:
The app must display partner information.
The app must alert project managers when changes to the partner information occur.
The app must display project information including an image gallery to view pictures of construction projects.
Project managers must be able to access the information remotely and securely.

Security:
VanArsdel must control access to its resources to ensure sensitive services and information are accessible only by authorized users and/or managed devices.
Employees must be able to securely share data, based on corporate policies, with other VanArsdel employees and with partners who are located on construction job sites.
VanArsdel management does NOT want to create and manage user accounts for partners.

Technical Requirements
Architecture:
VanArsdel requires a non-centralized stateless architecture fonts data and services where application, data, and computing power are at the logical extremes of the network.
VanArsdel requires separation of CPU storage and SQL services

Data Storage:
VanArsdel needs a solution to reduce the number of operations on the contractor information table. Currently, data transfer rates are excessive, and queue length for read/write operations affects performance.
A mobile service that is used to access contractor information must have automatically scalable, structured storage
Images must be stored in an automatically scalable, unstructured form.

Mobile Apps:
VanArsdel mobile app must authenticate employees to the company's Active Directory.
Event-triggered alerts must be pushed to mobile apps by using a custom Node.js script.
The customer support app should use an identity provider that is configured by using the Access Control Service for current profile registration and authentication.
The customer support team will adopt future identity providers that are configured through Access Control Service.

Security:
Active Directory Federated Server (AD FS) will be used to extend AD into Azure.
Helpdesk administrators must have access to only the groups of Azure resources they are responsible for.
Azure administration will be performed by a separate group.
IT administrative overhead must be minimized.
Permissions must be assigned by using Role Based Access Control (RBAC).
Line of business applications must be accessed securely.

QUESTION 1
You need to assign permissions for the Virtual Machine workloads that you migrate to Azure.
The solution must use the principal of least privileges.
What should you do?

A. Create all VMs in the cloud service named Groupl and then connect to the Azure subscription. Run the following Windows PowerShell command:

```
New-AzureRoleAssignment-Mail user1@vanarsdelltd.com-RoleDefinitionName
Contributor-ResoureeGroupName group1
```

B. In the Azure portal, select an individual virtual machine and add an owner.
C. In the Azure portal, assign read permission to the user at the subscription level.
D. Create each VM in a separate cloud service and then connect to the Azure subscription. Run the following Windows PowerShell command:
```
Get-AzureVM | New-AzureRoleAssignment-Mail userl@vanarsdelltd.com-
RoleDefinitionName Contributor
```

Answer: A
Explanation:
* Scenario: Permissions must be assigned by using Role Based Access Control (RBAC).
* Role-Based access control (RBAC) in the Azure Portal and Azure Resource Management API allows you to manage access to your subscription at a fine-grained level. With this feature, you can grant access for Active Directory users, groups, or service principals by assigning some roles to them at a particular scope.
Create a role assignment
Use New-AzureRoleAssignment to create a role assignment.
Example: This will create a role assignment for a group at a resource group level.
PS C:\> New-AzureRoleAssignment -ObjectID <group object ID> -RoleDefinitionName Reader -ResourceGroupName group1
https://azure.microsoft.com/en-gb/documentation/articles/role-based-access-control-powershell/

QUESTION 2
You need to design the system that alerts project managers to data changes in the contractor information app.
Which service should you use?

A. Azure Mobile Service
B. Azure Service Bus Message Queueing
C. Azure Queue Messaging
D. Azure Notification Hub

Answer: B
Explanation:
https://msdn.microsoft.com/en-us/library/azure/hh767287.aspx

QUESTION 3
You need to recommend a solution that allows partners to authenticate.
Which solution should you recommend?

A. Configure the federation provider to trust social identity providers.
B. Configure the federation provider to use the Azure Access Control service.
C. Create a new directory in Azure Active Directory and create a user account for the partner.
D. Create an account on the VanArsdel domain for the partner and send an email message that contains the password to the partner.

Answer: B
Explanation:
* Scenario: The partners all use Hotmail.com email addresses.

* In Microsoft Azure Active Directory Access Control (also known as Access Control Service or ACS), an identity provider is a service that authenticates user or client identities and issues security tokens that ACS consumes.
The ACS Management Portal provides built-in support for configuring Windows Live ID as an ACS Identity Provider.
Incorrect:
Not C, not D: Scenario: VanArsdel management does NOT want to create and manage user accounts for partners.
https://msdn.microsoft.com/en-us/library/azure/gg185971.aspx

QUESTION 4
You are designing a plan to deploy a new application to Azure.
The solution must provide a single sign-on experience for users.
You need to recommend an authentication type.
Which authentication type should you recommend?

A. SAML credential tokens
B. Azure managed access keys
C. Windows Authentication
D. MS-CHAP

Answer: A
Explanation:
A Microsoft cloud service administrator who wants to provide their Azure Active Directory (AD) users with sign-on validation can use a SAML 2.0 compliant SP-Lite profile based Identity Provider as their preferred Security Token Service (STS) / identity provider. This is useful where the solution implementer already has a user directory and password store on-premises that can be accessed using SAML 2.0. This existing user directory can be used for sign-on to Office 365 and other Azure AD-secured resources.
https://msdn.microsoft.com/en-us/library/azure/dn641269.aspx?f=255&MSPPError=-2147217396

QUESTION 5
You need to prepare the implementation of data storage for the contractor information app.
What should you?

A. Create a storage account and implement multiple data partitions.
B. Create a Cloud Service and a Mobile Service. Implement Entity Group transactions.
C. Create a Cloud Service and a Deployment group. Implement Entity Group transactions.
D. Create a Deployment group and a Mobile Service. Implement multiple data partitions.

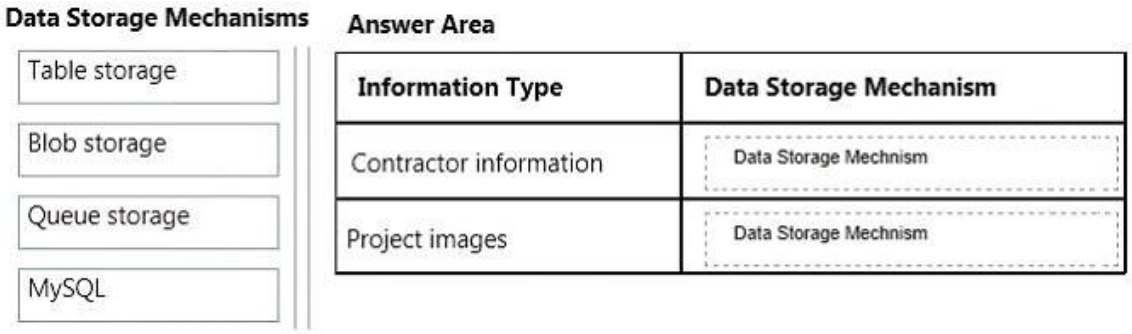
Answer: B
Explanation:
VanArsdel needs a solution to reduce the number of operations on the contractor information table.
Currently, data transfer rates are excessive, and queue length for read/write operations affects performance.
https://msdn.microsoft.com/en-us/library/azure/dd894038.aspx

QUESTION 6
You need to ensure that users do not need to re-enter their passwords after they authenticate to cloud applications for the first time.
What should you do?

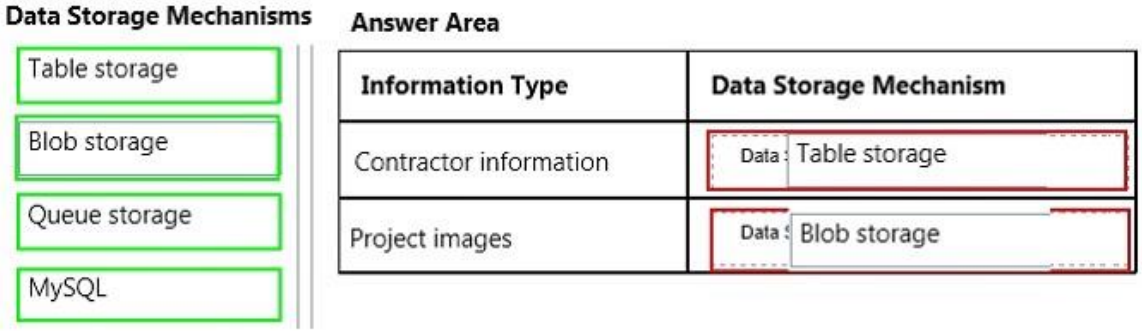
A. Enable Microsoft Account authentication.
B. Set up a virtual private network (VPN) connection between the VanArsdel premises and Azure datacenter.
Set up a Windows Active Directory domain controller in Azure VM.
Implement Integrated Windows authentication.
C. Deploy ExpressRoute.
D. Configure Azure Active Directory Sync to use single sign-on (SSO).

Answer: D
Explanation:
Single sign-on (SSO) is a property of access control of multiple related, but independent software systems. With this property a user logs in once and gains access to all systems without being prompted to log in again at each of them.
http://en.wikipedia.org/wiki/Single_sign-on

QUESTION 7
Drag and Drop Question
You need to recommend data storage mechanisms for the solution.
What should you recommend? To answer, drag the appropriate data storage mechanism to the correct information type. Each data storage mechanism may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.



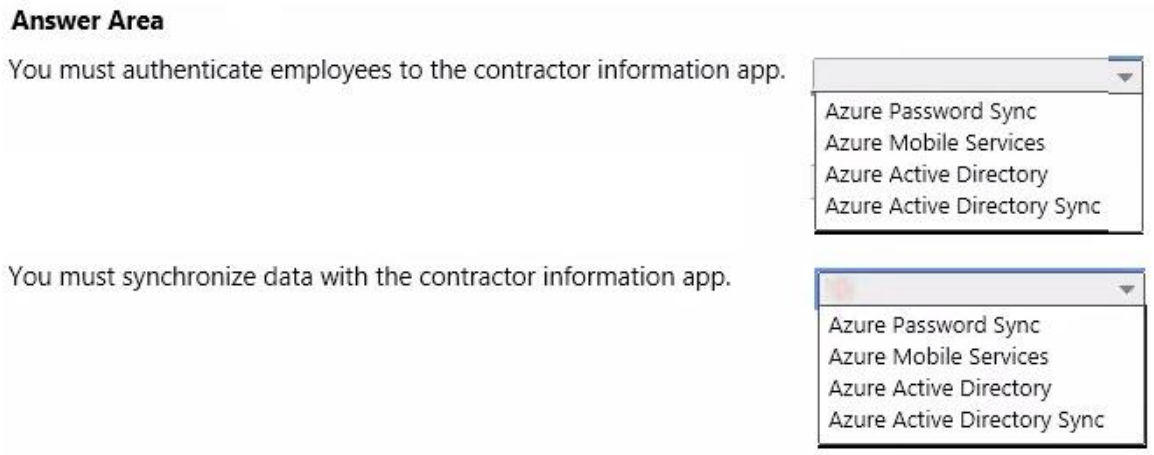
Answer:



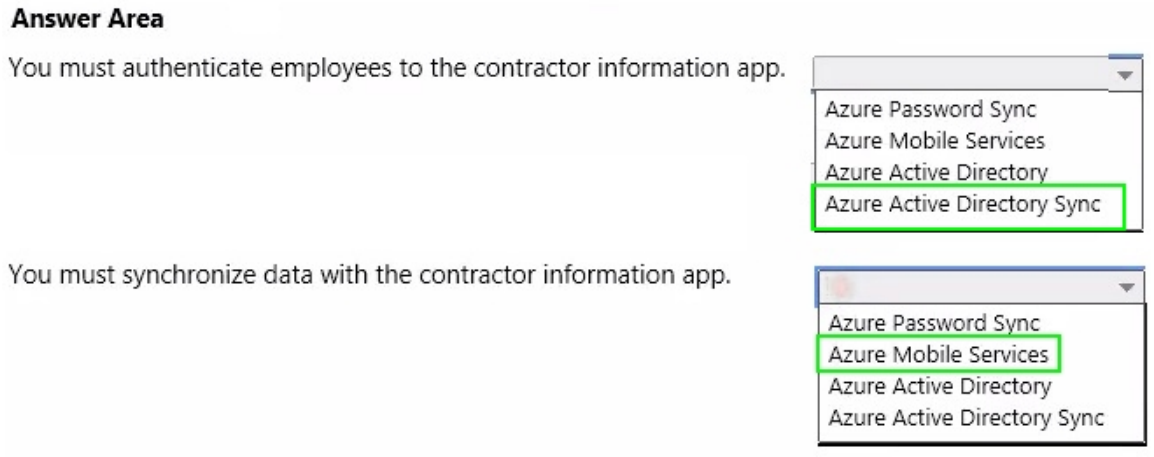
Explanation:
* Use Table storage for Contractor information
* Use Blob for Project Images

* Scenario: VanArsdel needs a solution to reduce the number of operations on the contractor information table. Currently, data transfer rates are excessive, and queue length for read/write operations affects performance.
/ A mobile service that is used to access contractor information must have automatically scalable, structured storage
/ Images must be stored in an automatically scalable, unstructured form.
Note: Blob is an acronym for Binary Large object. Basically Blob is a sequence of bytes – just what an application needs. Blob can hold audio, video, email messages, archived files, zip files or a word processing document in a very general way.
http://www.thewindowsclub.com/understanding-blobqueuetable-storage-windows-azure

QUESTION 8
Hotspot Question
You need to design the contractor information app.
What should you recommend? To answer, select the appropriate options in the answer area.



Answer:



Explanation:
- They also plan to extend their on-premises Active Directory into Azure for mobile app authentication
- VanArsdel mobile app must authenticate employees to the company's Active Directory.
http://azure.microsoft.com/en-gb/documentation/articles/mobile-services-ios-get-started-

offlinedata/

QUESTION 9
You are designing an Azure web application.
The solution will be used by multiple customers.
Each customer has different business logic and user interface requirements.
Not all customers use the same version of the .NET runtime.
You need to recommend a deployment strategy.
What should you recommend?

A. Deploy with multiple web role instances.
B. Deploy each application in a separate tenant.
C. Deploy all applications in one tenant.
D. Deploy with multiple worker role instances.

Answer: B
Explanation:
There are two types of tenant environments. The simplest type is a single-tenant application where one customer has 100% dedicated access to an application's process space. A single Tenant Applications has a separate, logical instance of the application for each customer or client. A single tenant application is much more predictable and stable by its nature since there will never be more than one dedicated customer at any point in time in that VM. That customer has all of its users accessing that dedicated instance of the application.
Multi Tenancy and Windows Azure. Overview of Multi tenant Application and Single tenant Application Architectural considerations.
http://sanganakauthority.blogspot.in/2011/12/multi-tenancy-and-windows-azure.html

QUESTION 10
You design an Azure application that processes images.
The maximum size of an image is 10 MB.
The application includes a web role that allows users to upload images and a worker role with multiple instances that processes the images.
The web role communicates with the worker role by using an Azure Queue service.
You need to recommend an approach for storing images that minimizes storage transactions.
What should you recommend?

A. Store images in Azure Blob service.
Store references to the images in the queue.
B. Store images in the queue.
C. Store images in OneDrive attached to the worker role instances.
Store references to the images in the queue.
D. Store images in local storage on the web role instance.
Store references to the images in the queue.

Answer: A
Explanation:
https://msdn.microsoft.com/en-gb/library/ff803365.aspx
https://msdn.microsoft.com/en-us/library/azure/hh767287.aspx

QUESTION 11
You are designing an Azure application.
The application includes two web roles and three instances of a worker role.

The web roles send requests to the worker role by using one or more Azure Queues.
You need to recommend a queue design for sending requests to the worker role.
What should you recommend?

A. Create a queue for each combination of web roles and worker role instances.
Send requests to all worker role instances based on the sending web role.
B. Create a single queue.
Send all requests on the single queue.
C. Create a queue for each worker role instance.
Send requests on each worker queue by using a round robin rotation.
D. Create a queue for each web role.
Send requests on all queues at the same time.

Answer: B
Explanation:
to communicate with the worker role, a web role instance places messages on to a queue.
A worker role instance polls the queue for new messages, retrieves them, and processes them.
There are a couple of important things to know about the way the queue service works in Azure.
First, you reference a queue by name, and multiple role instances can share a single queue.
Second, there is no concept of a typed message; you construct a message from either a string or a byte array. An individual message can be no more than 64 kilobytes (KB) in size.
https://msdn.microsoft.com/en-gb/library/ff803365.aspx
http://azure.microsoft.com/en-gb/documentation/articles/cloud-services-dotnet-multi-tier-app-using-service-bus-queues/

QUESTION 12
You are designing an Azure application that will use a worker role.
The worker role will create temporary files.
You need to minimize storage transaction charges.
Where should you create the files?

A. In Azure local storage
B. In Azure Storage page blobs
C. On an Azure Drive
D. In Azure Storage block blobs

Answer: A
Explanation:
Local storage is temporary in Azure. So, if the virtual machine supporting your role dies and cannot recover, your local storage is lost! Therefore, Azure developers will tell you, only volatile data should ever be stored in local storage of Azure.
Windows Azure Local File Storage How To Guide And Warnings
http://www.intertech.com/Blog/windows-azure-local-file-storage-how-to-guide-and-warnings/
http://blog.codingoutloud.com/2011/06/12/azure-faq-can-i-write-to-the-file-system-on-windowsazure/

QUESTION 13
You are designing an Azure web application.
The application uses one worker role.
It does not use SQL Database.
You have the following requirements:

```
- Maximize throughput and system resource availability
```

- Minimize downtime during scaling

You need to recommend an approach for scaling the application.
Which approach should you recommend?

A. Increase the role instance size.
B. Set up horizontal partitioning.
C. Increase the number of role instances.
D. Set up vertical partitioning.

Answer: C
Explanation:
On the Scale page of the Azure Management Portal, you can manually scale your application or you can set parameters to automatically scale it. You can scale applications that are running Web Roles, Worker Roles, or Virtual Machines. To scale an application that is running instances of Web Roles or Worker Roles, you add or remove role instances to accommodate the work load.
How to Scale an Application
http://azure.microsoft.com/en-gb/documentation/articles/cloud-services-how-to-scale/

QUESTION 14
You are evaluating an Azure application.
The application includes the following elements:

- A web role that provides the ASP.NET user interface and business logic
- A single SQL database that contains all application data

Each webpage must receive data from the business logic layer before returning results to the client. Traffic has increased significantly.
The business logic is causing high CPU usage.
You need to recommend an approach for scaling the application.
What should you recommend?

A. Store the business logic results in Azure Table storage.
B. Vertically partition the SQL database.
C. Move the business logic to a worker role.
D. Store the business logic results in Azure local storage.

Answer: C
Explanation:
For Cloud Services in Azure applications need both web and worker roles to scale well.
Application Patterns and Development Strategies for SQL Server in Azure Virtual Machines
https://msdn.microsoft.com/en-us/library/azure/dn574746.aspx

QUESTION 15
You are planning an upgrade strategy for an existing Azure application.
Multiple instances of the application run in Azure.
The management team is concerned about application downtime, due to a business service level agreement (SLA).
You are evaluating which change in your environment will require downtime.
You need to identify the changes to the environment that will force downtime.
Which change always requires downtime?

A. Adding an HTTPS endpoint to a web role
B. Upgrading the hosted service by deploying a new package
C. Changing the value of a configuration setting
D. Changing the virtual machine size

Answer: A
Explanation:
If you change the number of endpoints for your service, for example by adding a HTTPS endpoint for your existing Web Role, it will require downtime.
Re-Deploying your Windows Azure Service without Incurring Downtime
http://blog.toddysm.com/2010/06/re-deploying-your-windows-azure-service-without-incurringdowntime.html

QUESTION 16
You are designing an Azure application that processes graphical image files.
The graphical Images are processed in batches by remote applications that run on multiple servers.
You have the following requirements:

```
- The application must remain operational during batch-processing
operations.
- Users must be able to roll back each image to a previous version.
```

You need to ensure that each remote application has exclusive access to an image while the application processes the image.
Which type of storage should you use to store the images?

A. Table service
B. Queue service
C. Blob service
D. A single Azure VHD that is attached to the web role

Answer: C
Explanation:
* Blob Leases allow you to claim ownership to a Blob. Once you have the lease you can then update the Blob or delete the Blob without worrying about another process changing it underneath you. When a Blob is leased, other processes can still read it, but any attempt to update it will fail. You can update Blobs without taking a lease first, but you do run the chance of another process also attempting to modify it at the same time.
* You can opt to use either optimistic or pessimistic concurrency models to manage access to blobs and containers in the blob service.
Azure Blob Storage Part 8: Blob Leases
http://justazure.com/azure-blob-storage-part-8-blob-leases/
Using Blob Leases to Manage Concurrency with Table Storage
http://www.azurefromthetrenches.com/?p=1371

QUESTION 17
You are designing an Azure application that stores data.
You have the following requirements:

```
- The data storage system must support storing more than 500 GB of
data.
- Data retrieval must be possible from a large number of parallel
```

threads.
- Threads must not block each other.

You need to recommend an approach for storing data.
What should you recommend?

A. Azure Notification Hubs
B. A single SQL database in Azure
C. Azure Queue storage
D. Azure Table storage

Answer: D
Explanation:
* Azure Table Storage can be useful for applications that must store large amounts of nonrelational data, and need additional structure for that data. Tables offer key-based access to unschematized data at a low cost for applications with simplified data-access patterns. While Azure Table Storage stores structured data without schemas, it does not provide any way to represent relationships between the data.
* As a solution architect/developer, consider using Azure Table Storage when:
/ Your application stores and retrieves large data sets and does not have complex relationships that require server-side joins, secondary indexes, or complex server-side logic.
/ You need to achieve a high level of scaling without having to manually shard your dataset.
Azure Table Storage and Windows Azure SQL Database - Compared and Contrasted
https://msdn.microsoft.com/en-us/library/azure/jj553018.aspx

QUESTION 18
You are designing a Windows Azure application.
The application includes processes that communicate by using Windows Communications Foundation (WCF) services.
The WCF services must support streaming.
You need to recommend a host for the processes and a WCF binding.
Which two actions should you recommend?
(Each correct answer presents part of the solution. Choose two.)

A. Host the processes in web roles.
B. Host the processes in worker roles.
C. Use NetTcpBinding for the WCF services.
D. Use WSHttpBinding for the WCF services.

Answer: BC

QUESTION 19
You are designing a Windows Azure application.
Messages will be placed into a Windows Azure Queue and then processed by a worker role. There is no requirement for adherence to the Windows Azure Service Level Agreement (SLA). You need to recommend an approach for concurrently processing messages while minimizing compute cost.
What should you recommend?

A. A single role instance that processes messages individually
B. A single role instance with multithreaded request processing
C. Multiple role instances that process messages individually
D. Multiple role instances, each with multithreaded request processing

Answer: B

QUESTION 20
You are designing a Windows Azure application that will use a worker role.
The worker role will create temporary files.
You need to recommend an approach for creating the temporary files that minimizes storage transactions.
What should you recommend?

A. Create the files on a Windows Azure Drive.
B. Create the files in Windows Azure local storage.
C. Create the files in Windows Azure Storage page blobs.
D. Create the files in Windows Azure Storage block blobs.

Answer: B

QUESTION 21
You have business services that run on an on-premises mainframe server.
You must provide an intermediary configuration to support existing business services and Azure.
The business services cannot be rewritten.
The business services are not exposed externally.
You need to recommend an approach for accessing the business services.
What should you recommend?

A. Connect to the on-premises server by using a custom service in Azure.
B. Expose the business services to the Azure Service Bus by using a custom service that uses relay binding.
C. Expose the business services externally.
D. Move all business service functionality to Azure.

Answer: B
Explanation:
The Service Bus relay service enables you to build hybrid applications that run in both an Azure datacenter and your own on-premises enterprise environment. The Service Bus relay facilitates this by enabling you to securely expose Windows Communication Foundation (WCF) services that reside within a corporate enterprise network to the public cloud, without having to open a firewall connection, or require intrusive changes to a corporate network infrastructure.
How to Use the Service Bus Relay Service
http://azure.microsoft.com/en-gb/documentation/articles/service-bus-dotnet-how-to-use-relay/

QUESTION 22
You design an Azure web application.
The web application is accessible by default as a standard cloudapp.net URL.
You need to recommend a DNS resource record type that will allow you to configure access to the web application by using a custom domain name.
Which DNS record type should you recommend?

A. SRV
B. MX
C. CNAME

D. A

Answer: C
Explanation:
You can also use CNAME or A records to associate a custom domain name with your VM. When you use A records, however, you need to note that the VIP of your VM might change. When you deallocate a VM, the associated VIP is released. And when the VM is restarted later, a new VIP will be picked and assigned. If you want to ensure that your VM has a static public IP address, you'll need to confi gure a static IP address for it as described earlier.
http://azure.microsoft.com/en-gb/documentation/articles/cloud-services-custom-domain-name/

QUESTION 23
A company hosts a website and exposes web services on the company intranet.
The intranet is secured by using a firewall. Company policies prohibit changes to firewall rules.
Devices outside the firewall must be able to access the web services.
You need to recommend an approach to enable inbound communication.
What should you recommend?

A. The Azure Access Control Service
B. Windows Azure Pack
C. The Azure Service Bus
D. A web service in an Azure role that relays data to the internal web services

Answer: C
Explanation:
The Service Bus Relay is designed for the use-case of taking existing Windows Communication Foundation (WCF) web services and making those services securely accessible to solutions that reside outside the corporate perimeter without requiring intrusive changes to the corporate network infrastructure. Such Service Bus relay services are still hosted inside their existing environment, but they delegate listening for incoming sessions and requests to the cloud-hosted Service Bus.
.NET On-Premises/Cloud Hybrid Application Using Service Bus Relay
http://azure.microsoft.com/en-gb/documentation/articles/cloud-services-dotnet-hybrid-app-usingservice-bus-relay/

QUESTION 24
You are designing an Azure application.
The application includes services hosted in different geographic locations.
The service locations may change.
You must minimize the cost of communication between services.
You need to recommend an approach for data transmission between your application and Azure services.
The solution must minimize administrative effort.
What should you recommend?

A. Azure Table storage
B. Service Bus
C. Service Management API
D. Azure Queue storage

Answer: B
Explanation:

The cost of ACS transactions is insignificant when performing messaging operations against Service Bus queues. Service Bus acquires one ACS token per a single instance of the messaging factory object. The token is then reused until it expires, after about 20 minutes. Therefore, the volume of messaging operations in Service Bus is not directly proportional to the amount of ACS transactions required to support these operations.
Azure Queues and Service Bus Queues – Compared and Contrasted
https://msdn.microsoft.com/library/azure/hh767287.aspx

QUESTION 25
You are designing a distributed application for Azure.
The application must securely integrate with on-premises servers.
You need to recommend a method of enabling Internet Protocol security (IPsec)-protected connections between on-premises servers and the distributed application.
What should you recommend?

A. Azure Access Control
B. Azure Content Delivery Network (CDN)
C. Azure Service Bus
D. Azure Site-to-Site VPN

Answer: D
Explanation:
IPsec can be used on Azure Site-to-Site VPN connections. Distributed applications can used the IPSec VPN connections to communicate.
About Virtual Network Secure Cross-Premises Connectivity
https://msdn.microsoft.com/en-us/library/azure/dn133798.aspx

QUESTION 26
A company has 10 on-premises SQL databases.
The company plans to move the databases to SQL Server 2012 that runs in Azure Infrastructure-as-a-Service (IaaS).
After migration, the databases will support a limited number of Azure websites in the same Azure Virtual Network.
You have the following requirements:

```
- You must restore copies of existing on-premises SQL databases to the
SQL servers that run in Azure IaaS.
- You must be able to manage the SQL databases remotely.
- You must not open a direct connection from all of the machines on the
on-premises network to Azure.
- Connections to the databases must originate from only five Windows
computers.
- You need to configure remote connectivity to the databases.
```

Which technology solution should you implement?

A. Azure Virtual Network site-to-site VPN
B. Azure Virtual Network multi-point VPN
C. Azure Virtual Network point-to-site VPN
D. Azure ExpressRoute

Answer: C
Explanation:

A point-to-site VPN would meet the requirements.
Configure a Point-to-Site VPN connection to an Azure Virtual Network
https://azure.microsoft.com/en-us/documentation/articles/vpn-gateway-point-to-site-create/

QUESTION 27
You have several virtual machines (VMs) that run in Azure.
You also have a single System Center 2012 R2 Configuration Manager (SCCM) primary site on-premises.
You have the following requirements:

```
- All VMs must run on the same virtual network.
- Network traffic must be minimized between the on-premises datacenter
and Azure.
- The solution minimize complexity.
```

You need to use SCCM to collect inventory and deploy software to Azure VMs.
What should you do first?

A. Configure client push for the Azure virtual network.
B. Enable and configure Operations Insights in Azure.
C. Install a cloud distribution point on an Azure VM.
D. Install a secondary site underneath the primary site onto an Azure VM.

Answer: C
Explanation:
Cloud-based distribution Point, a Configuration Manager Site System Role in the Cloud Much of the Configuration Manager topology is made up of distribution points, they are very helpful in many situations where bandwidth and geographical separation are the facts of life, but also hard to manage if you have hundreds or even thousands of them.
This feature started with the vision that it makes perfect sense to have big distribution points in the Windows Azure cloud where one should not worry about things like (but not limited to) size, performance, reliability, security, access from all around the world, hardware/software update issues etc.
Note: Content management in System Center 2012 Configuration Manager provides the tools for you to manage content files for applications, packages, software updates, and operating system deployment. Configuration Manager uses distribution points to store files that are required for software to run on client computers. These distribution points function as distribution centers for the content files and let users download and run the software. Clients must have access to at least one distribution point from which they can download the files.
New Distribution Points in Configuration Manager SP1
http://blogs.technet.com/b/configmgrteam/archive/2013/01/31/new-distribution-points-inconfiguration-manager-sp1.aspx

QUESTION 28
You are running a Linux guest in Azure Infrastructure-as-a-Service (IaaS).
You must run a daily maintenance task.
The maintenance task requires native BASH commands.
You need to configure Azure Automation to perform this task.
Which three actions should you perform? Each correct answer presents part of the solution.

A. Create an automation account.
B. Create an Orchestrator runbook.
C. Create an asset credential.

D. Run the Invoke-Workflow Azure PowerShell cmdlet.
E. Import the SSH PowerShell Module.

Answer: ACE
Explanation:
A: An Automation Account is a container for your Azure Automation resources: it provides a way to separate your environments or further organize your workflows.
To create An Automation Account
1. Log in to the Azure Management Portal.
2. In the Management Portal, click Create an Automation Account.
3. On the Add a New Automation Account page, enter a name and pick a region for the account.
Get started with Azure Automation
http://azure.microsoft.com/en-gb/documentation/articles/automation-create-runbook-fromsamples/
C:
* Asset credentials are either a username and password combination that can be used with Windows PowerShell commands or a certificate that is uploaded to Azure Automation.
* The Assets page in Automation displays the various resources (also called “settings”) that are globally available to be used in or associated with a runbook, plus commands to import an integration module, add a new asset, or delete an asset. Assets include variables, schedules, credentials, and connections.
Getting Started with Azure Automation: Automation Assets
http://azure.microsoft.com/blog/2014/07/29/getting-started-with-azure-automation-automationassets-2/
E:
Managing SSH enabled Linux hosts using Service Management Automation
http://blogs.technet.com/b/orchestrator/archive/2014/05/01/managing-ssh-enabled-linux-hostsusing-service-management-automation.aspx

QUESTION 29
A company has multiple Azure subscriptions.
It plans to deploy a large number of virtual machines (VMs) into Azure.
You install the Azure PowerShell module, but you are unable connect to all of the company's Azure subscriptions.
You need to automate the management of the Azure subscriptions.
Which two Azure PowerShell cmdlets should you run?

A. Get-AzurePublishSettingsFile
B. Import-AzurePublishSettingsFile
C. Add-AzureSubscription
D. Import-AzureCertificate
E. Get-AzureCertificate

Answer: AB
Explanation:
Before you start using the Windows Azure cmdlets to automate deployments, you must configure connectivity between the provisioning computer and Windows Azure. You can do this automatically by downloading the PublishSettings file from Windows Azure and importing it.
To download and import publish settings and subscription information At the Windows PowerShell command prompt, type the following command, and then press Enter.
Get-AzurePublishSettingsFile
2. Sign in to the Windows Azure Management Portal, and then follow the instructions to download your Windows Azure publishing settings. Save the file as a .publishsettings type file to your computer.

3. In the Windows Azure PowerShell window, at the command prompt, type the following command, and then press Enter.
Import-AzurePublishSettingsFile <mysettings>.publishsettings
How to: Download and Import Publish Settings and Subscription Information
https://msdn.microsoft.com/en-us/library/dn385850%28v=nav.70%29.aspx

QUESTION 30
Contoso, Ltd., uses Azure websites for public-facing customer websites.
The company has a mobile app that requires customers sign in by using a Contoso customer account.
Customers must be able to sign on to the websites and mobile app by using a Microsoft, Facebook, or Google account.
All transactions must be secured in-transit regardless of device.
You need to configure the websites and mobile app to work with external identity providers.
Which three actions should you perform? Each correct answer presents part of the solution.

A. Request a certificate from a domain registrar for the website URL, and enable TLS/SSL.
B. Configure IPsec for the websites and the mobile app.
C. Configure the KerberosTokenProfile 1.1 protocol.
D. Configure OAuth2 to connect to an external authentication provider.
E. Build an app by using MVC 5 that is hosted in Azure to provide a framework for the underlying authentication.

Answer: ADE
Explanation:
DE: This tutorial shows you how to build an ASP.NET MVC 5 web application that enables users to log in using OAuth 2.0 with credentials from an external authentication provider, such as Facebook, Twitter, LinkedIn, Microsoft, or Google.
A:
* You will now be redirected back to the Register page of the MvcAuth application where you can register your Google account. You have the option of changing the local email registration name used for your Gmail account, but you generally want to keep the default email alias (that is, the one you used for authentication). Click Register.
* To connect to authentication providers like Google and Facebook, you will need to set up IISExpress to use SSL.
Code! MVC 5 App with Facebook, Twitter, LinkedIn and Google OAuth2 Sign-on (C#)
http://www.asp.net/mvc/overview/security/create-an-aspnet-mvc-5-app-with-facebook-andgoogle-oauth2-and-openid-sign-on

QUESTION 31
You are designing a solution that will interact with non-Windows applications over unreliable network connections.
You have a security token for each non-Windows application.
You need to ensure that non-Windows applications retrieve messages from the solution.
Where should you retrieve messages?

A. An Azure Queue
B. The Azure Service Bus Queue
C. An Azure blob storage container that has a private access policy
D. Azure Table storage

Answer: B

Explanation:
Any Microsoft or non-Microsoft applications can use a Service Bus REST API to manage and access messaging entities over HTTPS.
By using REST applications based on non-Microsoft technologies (e.g. Java, Ruby, etc.) are allowed not only to send and receive messages from the Service Bus, but also to create or delete queues, topics and subscription in a given namespace.
Service Bus Explorer
https://code.msdn.microsoft.com/windowsazure/service-bus-explorer-f2abca5a

QUESTION 32
You are the administrator for a company named Contoso, Ltd.
Contoso also has an Azure subscription and uses many on-premises Active Directory products as roles in Windows Server including the following:

- Active Directory Domain Services (AD DS)
- Active Directory Certificate Services (AD CS)
- Active Directory Rights Management Services (AD RMS) Active Directory Lightweight Directory Services (AD LDS) Active Directory Federation Services (AD FS).

Contoso must use the directory management services available in Azure Active Directory.
You need to provide information to Contoso on the similarities and differences between Azure Active Directory and the Windows Server Active Directory family of services.
Which feature does Azure Active Directory and on-premises Active Directory both support?

A. Using the GraphAPI to query the directory
B. Issuing user certificates
C. Supporting single sign-on (SSO)
D. Querying the directory with LDAP

Answer: C
Explanation:
AD FS supports Web single-sign-on (SSO) technologies, and so does Azure Active Directory.
If you want single sign on we usually suggest using ADFS if you're a Windows shop. Going forward though, Azure Active Directory is another alternative you can use.
Using Azure Active Directory for Single Sign On with Yammer
https://samlman.wordpress.com/2015/03/02/using-azure-active-directory-for-single-sign-on-withyammer/

QUESTION 33
A company has a very large dataset that includes sensitive information.
The dataset is over 30 TB in size.
You have a standard business-class ISP internet connection that is rated at 100 megabits/second.
You have 10 4-TB hard drives that are approved to work with the Azure Import/Export Service.
You need to migrate the dataset to Azure.

- The solution must meet the following requirements:
- The dataset must be transmitted securely to Azure.
- Network bandwidth must not increase.
- Hardware costs must be minimized.

What should you do?

A. Prepare the drives with the Azure Import/Export tool and then create the import job. Ship the drives to Microsoft via a supported carrier service.
B. Create an export job and then encrypt the data on the drives by using the Advanced Encryption Standard (AES). Create a destination Blob to store the export data.
C. Create an import job and then encrypt the data on the drives by using the Advanced Encryption Standard (AES). Create a destination Blob to store the import data.
D. Prepare the drives by using Sysprep.exe and then create the import job. Ship the drives to Microsoft via a supported carrier service.

Answer: A
Explanation:
You can use the Microsoft Azure Import/Export service to transfer large amounts of file data to Azure Blob storage in situations where uploading over the network is prohibitively expensive or not feasible. Use the Microsoft Azure Import/Export Service to Transfer Data to Blob Storage
http://azure.microsoft.com/en-gb/documentation/articles/storage-import-export-service/

QUESTION 34
Hotspot Question
You have an Azure website that runs on several instances.
You have a WebJob that provides additional functionality to the website.
The WebJob must run on all instances of the website.
You need to ensure that the WebJob runs even when the website is idle for long periods of time.
How should you create and configure the WebJob object? To answer, select the appropriate options in the answer area.

Answer Area

Requirement	Action
Create the WebJob object	Create the WebJob as a scheduled task. Create the WebJob as an on-demand task. Create the WebJob as a continuously running task.
Configure the WebJob object	Enable AlwaysOn for the website. Enable AlwaysOn for the database. Configure the WebJob to run continuously.

Answer:

Answer Area

Requirement	Action
Create the WebJob object	Create the WebJob as a scheduled task. Create the WebJob as an on-demand task. **Create the WebJob as a continuously running task.**
Configure the WebJob object	**Enable AlwaysOn for the website.** Enable AlwaysOn for the database. Configure the WebJob to run continuously.

Explanation:
* You can run programs or scripts in WebJobs in your App Service web app in three ways: on demand, continuously, or on a schedule.
* For continuous WebJobs there is an important feature called “always on” which is only available for a Standard Website, this will make sure your Website and WebJob are always up.
Run Background tasks with WebJobs
http://azure.microsoft.com/en-us/documentation/articles/web-sites-create-web-jobs/

QUESTION 35
Drag and Drop Question
You have a website that displays text, pictures, video files, and audio files.
The website processes requests from countries and regions all over the world.
You plan to migrate the website to the Azure platform.
The website has the following requirements:

```
- Encode, store, and stream audio and video at scale.
- Load-balance communications with the website instance that is closest
to the user's location.
- Deliver content with high-bandwidth and low latency.
```

You need to recommend the technologies to implement the solution.
Which technologies should you recommend? To answer, drag the appropriate technology to the correct requirement. Each technology may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

Technologies

- TrafficManager
- MediaServices
- Multifactor Authentication
- Service Bus
- Azure Active Directory
- Azure Content Delivery Network
- Windows Network Load Balancing
- Azure Blob Service

Answer Area

Requirement	Technology
Encode media	Technology
Load-balanced communication	Technology
Deliver content	Technology

Answer:

Technologies

- TrafficManager
- MediaServices
- Multifactor Authentication
- Service Bus
- Azure Active Directory
- Azure Content Delivery Network
- Windows Network Load Balancing
- Azure Blob Service

Answer Area

Requirement	Technology
Encode media	MediaServices
Load-balanced communication	TrafficManager
Deliver content	Azure Content Delivery Network

Explanation:

* MediaServices

Azure Media Services is being used to power consumer and enterprise streaming solutions worldwide. Combining powerful and highly scalable cloud-based encoding, encryption and steaming components, Azure Media Services is helping customers with valuable and premium video content to easily reach larger audiences on today's most popular digital devices, such as tablets and mobile phones. Media Services, Cloud for Premium Video Workflows
http://azure.microsoft.com/en-gb/services/media-services/

* TrafficManager

Traffic Manager, Geo-route incoming traffic to your app for better performance and availability
http://azure.microsoft.com/en-us/services/traffic-manager/

* Azure Content Delivery Network

The Azure Content Delivery Network (CDN) is designed to send audio, video, applications, images, and other files faster and more reliably to customers using servers that are closest to

each user. This dramatically increases speed and availability, resulting in significant user experience improvements.
Azure CDN, A fast and modern global delivery network for high-bandwidth content
http://azure.microsoft.com/en-us/services/cdn/

QUESTION 36
You are designing a Windows Azure application that will use Windows Azure Table storage.
The application will allow teams of users to collaborate on projects.
Each user is a member of only one team.
You have the following requirements:

```
- Ensure that each user can efficiently query records related to his or
her team's projects.
- Minimize data access latency.
```

You need to recommend an approach for partitioning table storage entities.
What should you recommend?

A. Partition by user.
B. Partition by team.
C. Partition by project.
D. Partition by the current date.

Answer: B

QUESTION 37
You are designing a Windows Azure application that will store data in two SQL Azure databases. The application will insert data in both databases as part of a single logical operation. You need to recommend an approach for maintaining data consistency across the databases.
What should you recommend?

A. Execute database calls on parallel threads.
B. Wrap the database calls in a single transaction scope.
C. Use Microsoft Distributed Transaction Coordinator (MSDTC).
D. Handle errors resulting from the database calls by using compensatory logic.

Answer: D

QUESTION 38
You are designing a Windows Azure application.
The application includes two web roles and three instances of a worker role.
The web roles will send requests to the worker role through one or more Windows Azure Queues.
You have the following requirements:

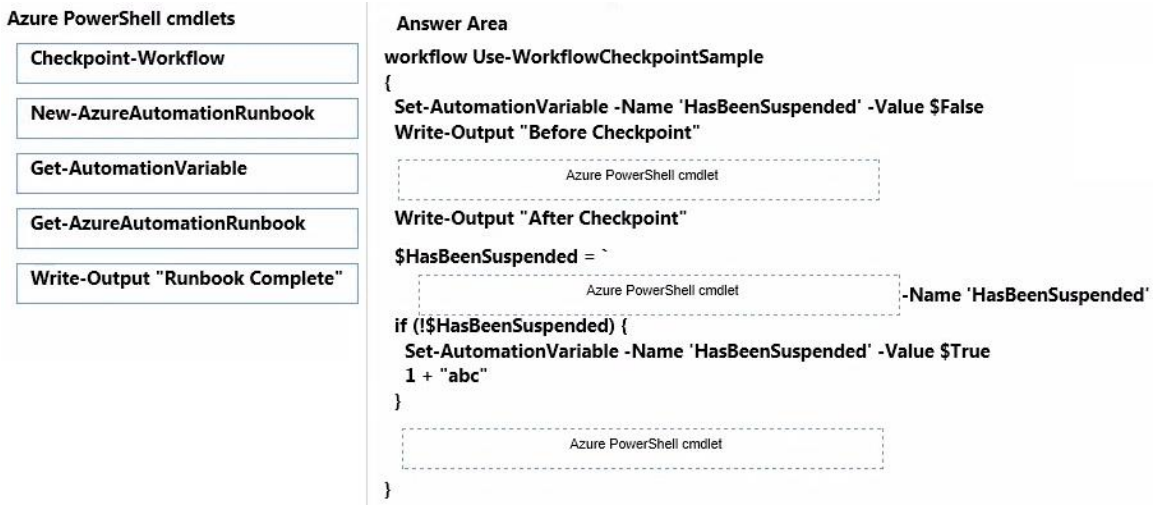
```
- Ensure that each request is processed exactly one time.
- Minimize the idle time of each worker role instance.
- Maximize the reliability of request processing.
```

You need to recommend a queue design for sending requests to the worker role.
What should you recommend?

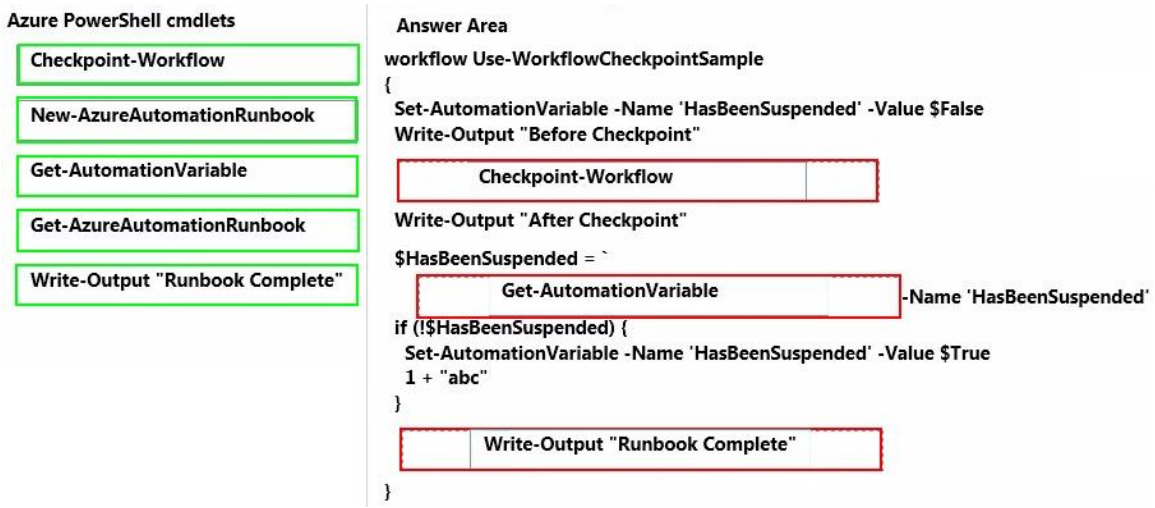
A. Create a single queue.
Send requests on the single queue.
B. Create a queue for each web role.
Send requests on all queues at the same time.
C. Create a queue for each worker role instance.
Send requests on each worker queue in a round robin.
D. Create a queue for each combination of web roles and worker role instances.
Send requests to all worker role instances based on the sending web role.

Answer: A

QUESTION 39
Drag and Drop Question
You need to automate tasks with Azure by using Azure PowerShell workflows.
How should you complete the Azure PowerShell script? To answer, drag the appropriate cmdlet to the correct location. Each cmdlet may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.



Answer:



Explanation:
https://gallery.technet.microsoft.com/scriptcenter/How-to-use-workflow-cd57324f

QUESTION 40
Hotspot Question
A company uses Azure for several virtual machine (VM) and website workloads.
The company plans to assign administrative roles to a specific group of users.
You have a resource group named GROUP1 and a virtual machine named VM2.
The users have the following responsibilities:

User	Responsibility
Admin1	Control access to VM2.
Admin2	Prepare reports with billing and usage information.
Admin3	Maintain all resources in the GROUP1 resource group.

You need to assign the appropriate level of privileges to each of the administrators by using the principle of least privilege.
What should you do? To answer, select the appropriate target objects and permission levels in the answer area.

Answer Area

Administrator Name	Target Object	Permission Level
Admin1	VM2 / GROUP1 / SUBSCRIPTION	Reader / Owner / Contributor
Admin2	VM2 / GROUP1 / SUBSCRIPTION	Reader / Owner / Contributor
Admin3	VM2 / GROUP1 / SUBSCRIPTION	Reader / Owner / Contributor

Answer:

Answer Area

Administrator Name	Target Object	Permission Level
Admin1	VM2 / GROUP1 / SUBSCRIPTION	Reader / Owner / Contributor
Admin2	VM2 / GROUP1 / SUBSCRIPTION	Reader / Owner / Contributor
Admin3	VM2 / GROUP1 / SUBSCRIPTION	Reader / Owner / Contributor

Explanation:
* Owner can manage everything, including access.
* Contributors can manage everything except access.
Note: Azure role-based access control allows you to grant appropriate access to Azure AD users, groups, and services, by assigning roles to them on a subscription or resource group or individual resource level.
Role-based access control in the Microsoft Azure portal
http://azure.microsoft.com/en-us/documentation/articles/role-based-access-control-configure/

QUESTION 41
Hotspot Question
Resources must authenticate to an identity provider.
You need to configure the Azure Access Control service.
What should you recommend? To answer, select the appropriate responses for each requirement in the answer area.

Answer Area

Action	Requirement
You must distribute an authorization token to a client when it authenticates against Windows Live ID.	Distribute an Identity Provider (IDP) token. Distribute an Access Control Service token. Distribute an Application Programming Interface (API) token
You must integrate an application with the Azure Access Control service.	Use WS-Trust. Use Kerberos.

Answer:

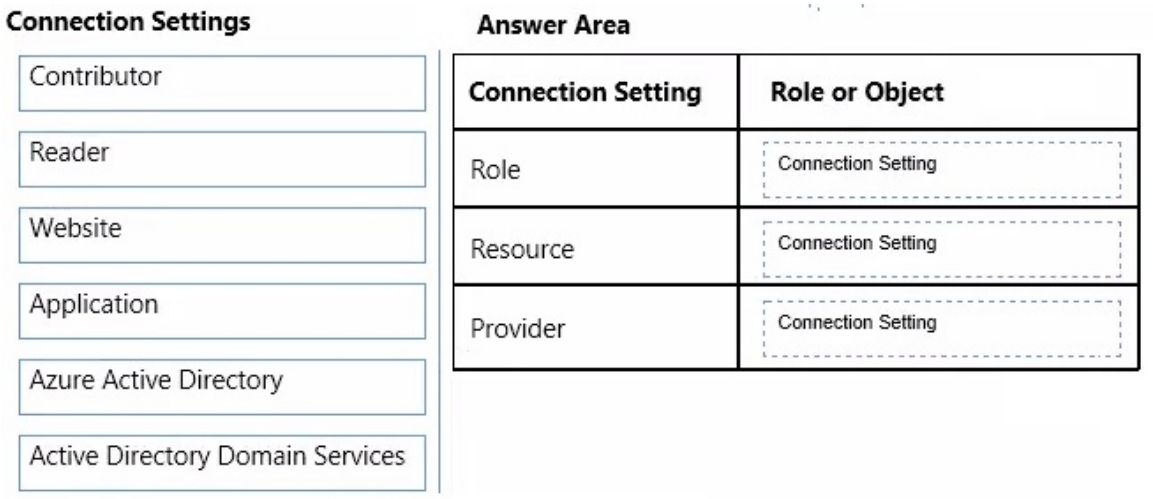
Answer Area

Action	Requirement
You must distribute an authorization token to a client when it authenticates against Windows Live ID.	Distribute an Identity Provider (IDP) token. Distribute an Access Control Service token. Distribute an Application Programming Interface (API) token
You must integrate an application with the Azure Access Control service.	Use WS-Trust. Use Kerberos.

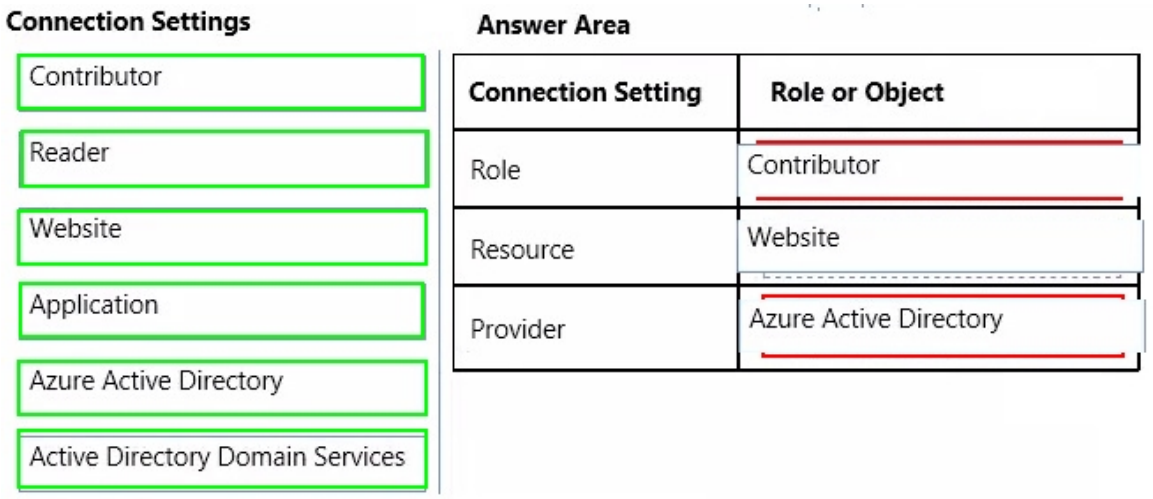
Explanation:
Box 1:
* Token - A user gains access to an RP application by presenting a valid token that was issued by an authority that the RP application trusts.
* Identity Provider (IP) - An authority that authenticates user identities and issues security tokens, such as Microsoft account (Windows Live ID), Facebook, Google, Twitter, and Active Directory. When Azure Access Control (ACS) is configured to trust an IP, it accepts and validates the tokens that the IP issues. Because ACS can trust multiple IPs at the same time, when your application trusts ACS, you can your application can offer users the option to be authenticated by any of the IPs that ACS trusts on your behalf.
How to Authenticate Web Users with Azure Active Directory Access Control
http://azure.microsoft.com/en-gb/documentation/articles/active-directory-dotnet-how-to-useaccess-control/
Box 2: WS-Trust is a web service (WS-*) specification and Organization for the Advancement of Structured Information Standards (OASIS) standard that deals with the issuing, renewing, and validating of security tokens, as well as with providing ways to establish, assess the presence of,

and broker trust relationships between participants in a secure message exchange. Azure Access Control (ACS) supports WS-Trust 1.3.
Incorrect:
ACS does not support Kerberos.
Protocols Supported in ACS
https://msdn.microsoft.com/en-us/library/azure/gg185948.aspx

QUESTION 42
Drag and Drop Question
Contoso, Ltd., uses Azure websites for their company portal sites.
Admin users need enough access to effectively perform site monitoring or management tasks.
You need to grant admin access to a group of 10 users.
How should you configure the connection? To answer, drag the role or object to the correct connection setting. Each item may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.



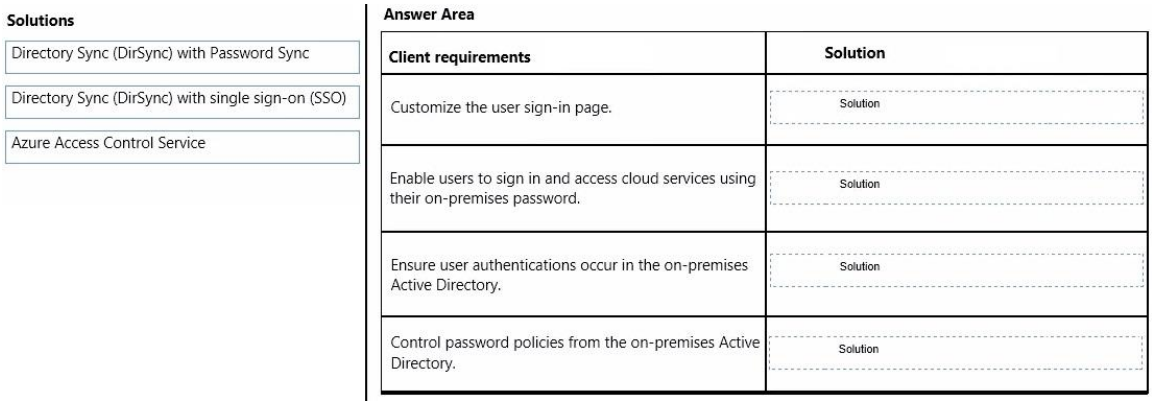
Answer:



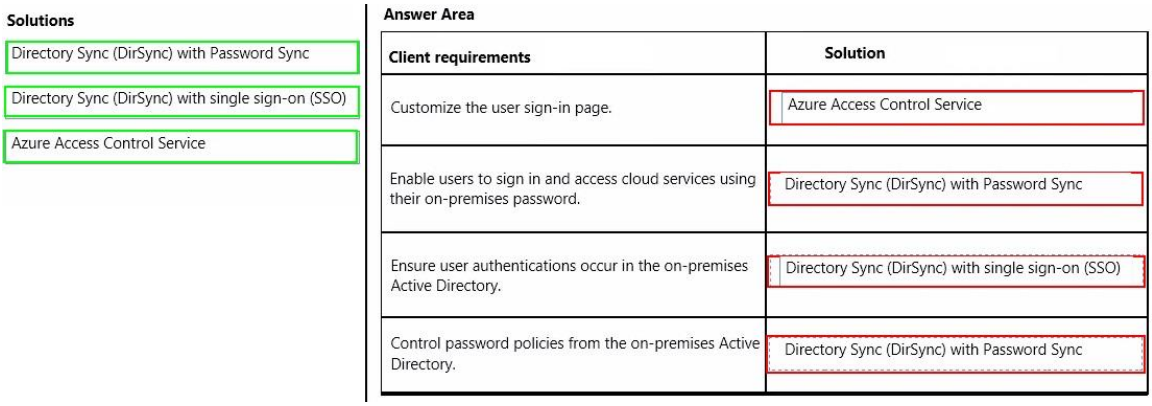
Explanation:
RBAC and Azure Websites Publishing

http://azure.microsoft.com/blog/2015/01/05/rbac-and-azure-websites-publishing/

QUESTION 43
Drag and Drop Question
You are migrating Active Directory Domain Services (AD DS) domains to Azure.
You need to recommend the least complex directory synchronization solution.
What should you recommend? To answer, drag the appropriate solution to the correct client requirement. Each solution may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

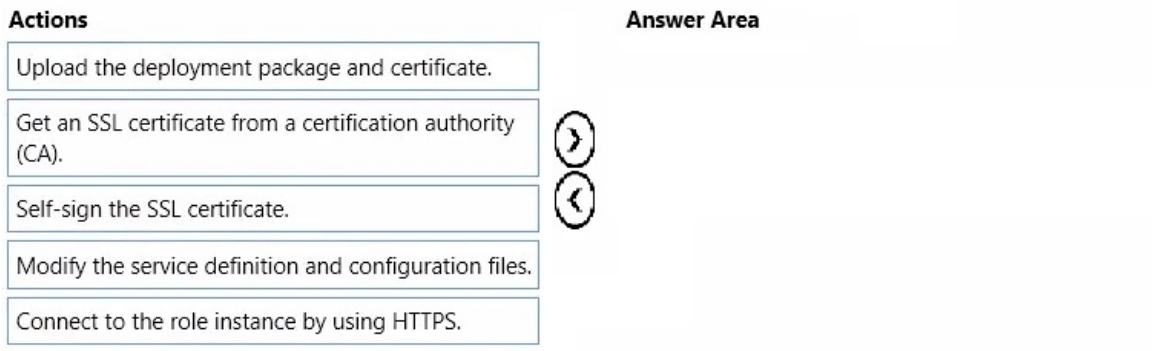


Answer:

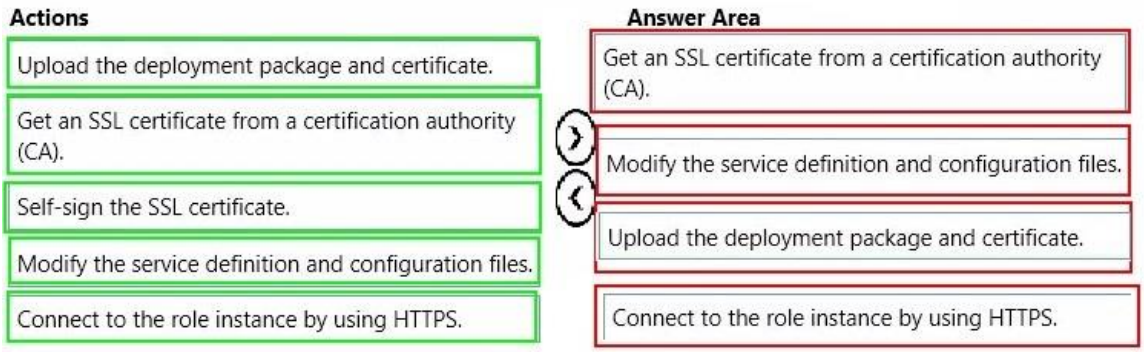


Explanation:
https://msdn.microsoft.com/en-us/library/azure/dn246918.aspx?f=255&MSPPError=-2147217396
http://blogs.office.com/2014/04/15/synchronizing-your-directory-with-office-365-is-easy/
http://blogs.office.com/2014/05/13/choosing-a-sign-in-model-for-office-365/

QUESTION 44
Drag and Drop Question
You have a web application on Azure.
The web application does not employ Secure Sockets Layer (SSL).
You need to enable SSL for your production deployment web application on Azure.
Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



Answer:



Explanation:
http://azure.microsoft.com/en-gb/documentation/articles/cloud-services-configure-sslcertificate/

QUESTION 45
You are designing a plan for testing a Windows Azure service.
The service runs in the development fabric but fails on Windows Azure.
You need to recommend an approach for identifying errors that occur when the service runs on Windows Azure.
What should you recommend?

A. Attach a debugger to the Windows Azure role instance.
B. Analyze debugging information captured by Windows Azure Diagnostics.
C. Modify the service configuration for the Windows Azure role to access development storage.
D. Analyze debugging information written to the output window of the Windows Azure role instance.

Answer: B

QUESTION 46
You are designing a Windows Azure web application.
The application will be accessible at a standard cloudapp.net URL.
You need to recommend a DNS resource record type that will allow you to configure access to the application through a custom domain name.
Which type should you recommend?

A. A
B. CNAME

C. MX
D. SRV

Answer: B

QUESTION 47
You are designing a plan to migrate an existing application to Windows Azure. The application currently resides on a server that has 20 GB of hard disk space. You need to recommend the smallest compute instance size that provides local storage equivalent to that of the existing server.
Which size should you recommend?

A. ExtraSmall
B. ExtraLarge
C. Small
D. Large

Answer: A

QUESTION 48
An application currently resides on an on-premises virtual machine that has 2 CPU cores, 4 GB of RAM, 20 GB of hard disk space, and a 10 megabit/second network connection.
You plan to migrate the application to Azure.
You have the following requirements:

```
- You must not make changes to the application.
- You must minimize the costs for hosting the application.
```

You need to recommend the appropriate virtual machine instance type.
Which virtual machine tier should you recommend?

A. Network Optimized (A Series)
B. General Purpose Compute, Basic Tier (A Series)
C. General Purpose Compute, Standard Tier (A Series)
D. Optimized Compute (D Series)

Answer: B
Explanation:
General purpose compute: Basic tier
An economical option for development workloads, test servers, and other applications that don't require load balancing, auto-scaling, or memory-intensive virtual machines.
CPU core range: 1-8
RAM range: 0.75 – 14 GB
Disk size: 20-240 GB
Incorrect answers:
Not A: Network optimized: fast networking with InfiniBand support Available in select data centers. A8 and A9 virtual machines feature Intel® Xeon® E5 processors. Adds a 40Gbit/s InfiniBand network with remote direct memory access (RDMA) technology. Ideal for Message Passing Interface (MPI) applications, high-performance clusters, modeling and simulations, video encoding, and other compute or network intensive scenarios.
Not C: CPU core range: 1-8
RAM range: 0.75 – 56 GB
Disk size: 20-605 GB

Not D: D-series virtual machines feature solid state drives (SSDs) and 60% faster processors than the A-series and are also available for web or worker roles in Azure Cloud Services. This series is ideal for applications that demand faster CPUs, better local disk performance, or higher memories.
Virtual Machines Pricing. Launch Windows Server and Linux in minutes
http://azure.microsoft.com/en-us/pricing/details/virtual-machines/

QUESTION 49
You are designing an Azure web application that includes many static content files.
The application is accessed from locations all over the world by using a custom domain name.
You need to recommend an approach for providing access to the static content with the least amount of latency,
Which two actions should you recommend? Each correct answer presents part of the solution.

A. Place the static content in Azure Table storage.
B. Configure a CNAME DNS record for the Azure Content Delivery Network (CDN) domain.
C. Place the static content in Azure Blob storage.
D. Configure a custom domain name that is an alias for the Azure Storage domain.

Answer: BC
Explanation:
B: There are two ways to map your custom domain to a CDN endpoint.
1. Create a CNAME record with your domain registrar and map your custom domain and subdomain to the CDN endpoint
2. Add an intermediate registration step with Azure cdnverify
C: The Azure Content Delivery Network (CDN) offers developers a global solution for delivering highbandwidth content by caching blobs and static content of compute instances at physical nodes in the United States, Europe, Asia, Australia and South America.
The benefits of using CDN to cache Azure data include:
/ Better performance and user experience for end users who are far from a content source, and are using applications where many 'internet trips' are required to load content
/ Large distributed scale to better handle instantaneous high load, say, at the start of an event such as a product launch

Using CDN for Azure
https://azure.microsoft.com/en-gb/documentation/articles/cdn-how-to-use/
How to map Custom Domain to Content Delivery Network (CDN) endpoint
https://github.com/Azure/azure-content/blob/master/articles/cdn-map-content-to-customdomain.md
https://github.com/Azure/azure-content/blob/master/articles/cdn-map-content-to-customdomain.md

QUESTION 50
You are designing an Azure development environment.
Team members learn Azure development techniques by training in the development environment.
The development environment must auto scale and load balance additional virtual machine (VM) instances.
You need to recommend the most cost-effective compute-instance size that allows team members to work with Azure in the development environment.
What should you recommend?

A. Azure A1 standard VM Instance
B. Azure A2 basic VM Instance

C. Azure A3 basic VM Instance
D. Azure A9 standard VM Instance

Answer: A
Explanation:
Azure A1 standard VM Instance would be cheapest with 1 CPU core, 0.75 GB RAM, and 40 GB HD. It would be good enough for training purposes.
Virtual Machines Pricing, Launch Windows Server and Linux in minutes
http://azure.microsoft.com/en-us/pricing/details/virtual-machines/

QUESTION 51
You are designing an Azure application that provides online backup storage for hundreds of media files. Each file is larger than 1GB.
The data storage solution has the following requirements:

```
- It must be capable of storing an average of 1TB of data for each
user.
- It must support sharing of data between all Windows Azure instances.
- It must provide random read/write access.
```

You need to recommend a durable data storage solution.
What should you recommend?

A. Azure Drive
B. Azure Page Blob service
C. Azure Block Blob service
D. Local storage on an Azure instance

Answer: B
Explanation:
Block blobs can store up to 200 GB of data and are optimized for streaming.
This is the type by which most blobs are stored.
Page blobs can store up to 1 TB and are optimized for random read/ write operations.
They provide the ability to write to a range of bytes in a Blob.
Virtual Drives in Azure Virtual Machines use page blobs because they are accessed randomly.
https://msdn.microsoft.com/en-us/library/azure/ee691964.aspx

QUESTION 52
You are designing an Azure web application.
All users must authenticate by using Active Directory Domain Services (AD DS) credentials.
You need to recommend an approach to enable single sign-on to the application for domain-authenticated users.
Which two actions should you recommend? Each correct answer presents part of the solution.

A. Use Forms authentication to generate claims.
B. Use the SQL membership provider in the web application.
C. Use Windows Identity Foundation in the web application.
D. Use Active Directory Federation Services (AD FS) to generate claims.

Answer: CD
Explanation:
What is Windows Identity Foundation?

https://msdn.microsoft.com/en-us/library/ee748475.aspx
DirSync with Single Sign-On
https://msdn.microsoft.com/en-us/library/azure/dn441213.aspx

Case Study 2 - Trey Research (Question 53 - Question 57)

Background
Overview
Trey Research conducts agricultural research and sells the results to the agriculture and food industries. The company uses a combination of on-premises and third-party server clusters to meet its storage needs. Trey Research has seasonal demands on its services, with up to 50 percent drops in data capacity and bandwidth demand during low-demand periods. They plan to host their websites in an agile, cloud environment where the company can deploy and remove its websites based on its business requirements rather than the requirements of the hosting company.
A recent fire near the datacenter that Trey Research uses raises the management team's awareness of the vulnerability of hosting all of the company's websites and data at any single location. The management team is concerned about protecting its data from loss as a result of a disaster.

Websites
Trey Research has a portfolio of 300 websites and associated background processes that are currently hosted in a third-party datacenter. All of the websites are written in ASP.NET, and the background processes use Windows Services. The hosting environment costs Trey Research approximately S25 million in hosting and maintenance fees.

Infrastructure
Trey Research also has on-premises servers that run VMs to support line-of-business applications. The company wants to migrate the line-of-business applications to the cloud, one application at a time. The company is migrating most of its production VMs from an aging VMWare ESXi farm to a Hyper-V cluster that runs on Windows Server 2012.

Applications
DistributionTracking
Trey Research has a web application named Distribution!racking. This application constantly collects realtime data that tracks worldwide distribution points to customer retail sites. This data is available to customers at all times. The company wants to ensure that the distribution tracking data is stored at a location that is geographically close to the customers who will be using the information. The system must continue running in the event of VM failures without corrupting data. The system is processor intensive and should be run in a multithreading environment.

HRApp
The company has a human resources (HR) application named HRApp that stores data in an on-premises SQL Server database. The database must have at feast two copies, but data to support backups and business continuity must stay in Trey Research locations only.
The data must remain on-premises and cannot be stored in the cloud.
HRApp was written by a third party, and the code cannot be modified. The human resources data is used by all business offices, and each office requires access to the entire database. Users report that HRApp takes all night to generate the required payroll reports, and they would like to reduce this time.

MetricsTracking
Trey Research has an application named MetricsTracking that is used to track analytics for the DistributionTracking web application. The data MetricsTracking collects is not customer-facing. Data is stored on an on-premises SQL Server database, but this data should be moved to the

cloud. Employees at other locations access this data by using a remote desktop connection to connect to the application, but latency issues degrade the functionality.
Trey Research wants a solution that allows remote employees to access metrics data without using a remote desktop connection. MetricsTracking was written in-house, and the development team is available to make modifications to the application if necessary. However, the company wants to continue to use SQL Server for MetricsTracking.

Business Requirements
Business Continuity
You have the following requirements:
- Move all customer-facing data to the cloud.
- Web servers should be backed up to geographically separate locations, If one website becomes unavailable, customers should automatically be routed to websites that are still operational.
- Data must be available regardless of the operational status of any particular website.
- The HRApp system must remain on-premises and must be backed up.
- The Met ricsTrac king data must be replicated so that it is locally available to all Trey Research offices.

Auditing and Security
You have the following requirements:
- Both internal and external consumers should be able to access research results.
- Internal users should be able to access data by using their existing company credentials without requiring multiple logins.
- Consumers should be able to access the service by using their Microsoft credentials.
- Applications written to access the data must be authenticated. Access and activity must be monitored and audited.
- Ensure the security and integrity of the data collected from the worldwide distribution points for the distribution tracking application.

Storage and Processing
You have the following requirements:
- Provide real-time analysis of distribution tracking data by geographic location.
- Collect and store large datasets in real-time data for customer use.
- Locate the distribution tracking data as close to the central office as possible to improve bandwidth.
- Co-locate the distribution tracking data as close to the customer as possible based on the customer's location.
- Distribution tracking data must be stored in the JSON format and indexed by metadata that is stored in a SQL Server database.
- Data in the cloud must be stored in geographically separate locations, but kept with the same political boundaries.

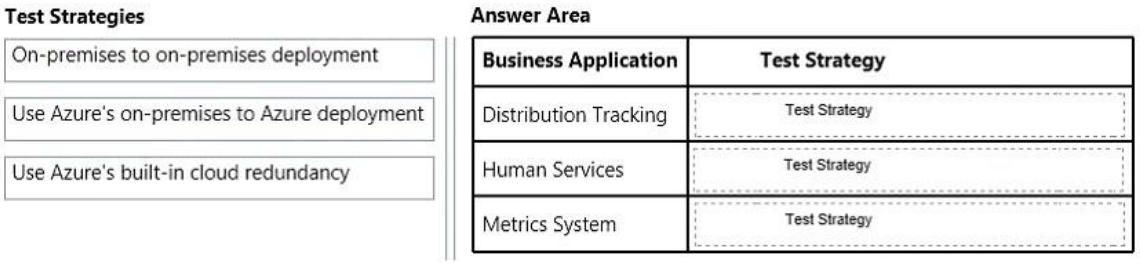
Technical Requirements
Migration
You have the following requirements:
- Deploy all websites to Azure.
- Replace on-premises and third-party physical server clusters with cloud-based solutions.
- Optimize the speed for retrieving exiting JSON objects that contain the distribution tracking data.

Recommend strategies for partitioning data for load balancing.

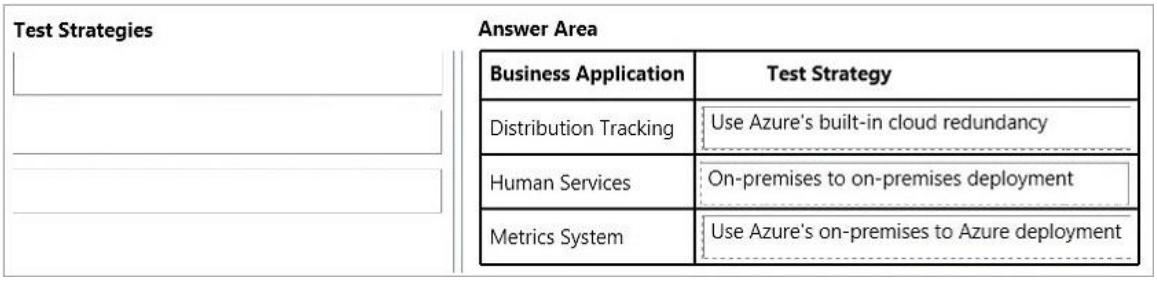
Auditing and Security
You have the following requirements:
- Use Active Directory for internal and external authentication.
- Use OAuth for application authentication.

Business Continuity
You have the following requirements:
- Data must be backed up to separate geographic locations.
- Web servers must run concurrent versions of all websites in distinct geographic locations.
- Use Azure to back up the on-premises MetricsTracking data.
- Use Azure virtual machines as a recovery platform for MetricsTracking and HRApp.
- Ensure that there is at least one additional on-premises recovery environment for the HRApp.

QUESTION 53
Drag and Drop Question
You need to recommend a test strategy for the disaster recovery system.
What should you do? To answer, drag the appropriate test strategy to the correct business application. Each test strategy may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.



Answer:



QUESTION 54
Hotspot Question
You need to plan the business continuity strategy.
For each requirement, what should you recommend? To answer, select the appropriate option from each list in the answer area.

Answer Area

You must ensure that customer facing data is replicated geographically.

- Shard the database horizontally and place each shard in a different datacenter.
- Create multiple instances of the SQL Database. Replicate the data between the instances.
- Use SQL Azure's backup feature to create a BACPAC file. Place the file in Blob storage.
- Replicate the data by using asynchronous replication.

You must ensure that client connect to Azure websites that run in the region closest to them.

- Use Traffic Manager to route traffic between geographic instances.
- Configure a local endpoint in the Azure Load Balancer Server. Configure the endpoints to use the same IP address.
- Assign separate URLs to multiple website instances. Configure DNS records to resolve the URL for each instance.
- Configure the site in an Azure WebSite and configure a WebJob to automate the failover.

Answer:

Answer Area

You must ensure that customer facing data is replicated geographically.

- Shard the database horizontally and place each shard in a different datacenter.
- **Create multiple instances of the SQL Database. Replicate the data between the instances.**
- Use SQL Azure's backup feature to create a BACPAC file. Place the file in Blob storage.
- Replicate the data by using asynchronous replication.

You must ensure that client connect to Azure websites that run in the region closest to them.

- **Use Traffic Manager to route traffic between geographic instances.**
- Configure a local endpoint in the Azure Load Balancer Server. Configure the endpoints to use the same IP address.
- Assign separate URLs to multiple website instances. Configure DNS records to resolve the URL for each instance.
- Configure the site in an Azure WebSite and configure a WebJob to automate the failover.

QUESTION 55
Drag and Drop Question
You need to ensure that customer data is secured both in transit and at rest.
Which technologies should you recommend? To answer, drag the appropriate technology to the correct security requirement. Each technology may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

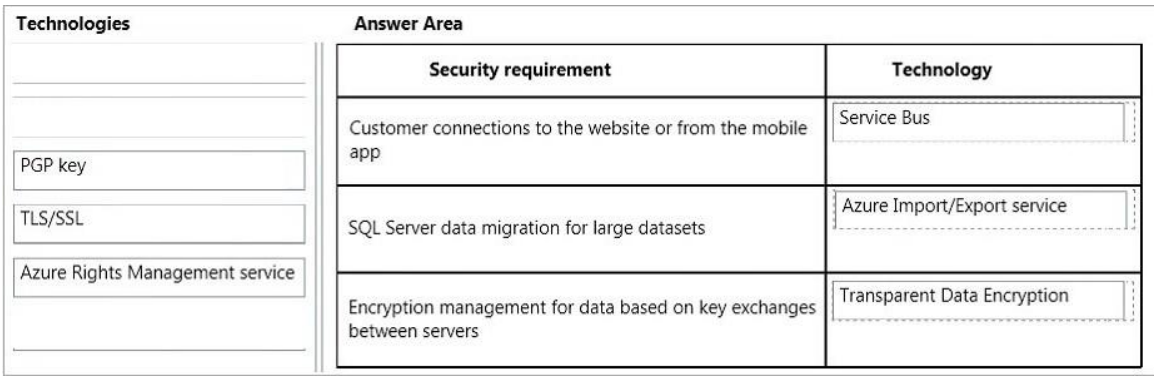
Technologies

- Transparent Data Encryption
- TLS/SSL
- PGP key
- Service Bus
- Azure Rights Management service
- Azure Import/Export service

Answer Area

Security requirement	Technology
Customer connections to the website or from the mobile app	Technology
SQL Server data migration for large datasets	Technology
Encryption management for data based on key exchanges between servers	Technology

Answer:



Explanation:
Service Bus
Service Bus queues are part of a broader Azure messaging infrastructure that supports queuing as well as publish/subscribe, Web service remoting, and integration patterns.
Import/Export
You can use the Microsoft Azure Import/Export service to transfer large amounts of file data to Azure Blob storage in situations where uploading over the network is prohibitively expensive or not feasible.
TDE
Transparent Data Encryption (often abbreviated to TDE) is a technology employed by both Microsoft and Oracle to encrypt database files. TDE offers encryption at file level. TDE solves the problem of protecting data at rest, encrypting databases both on the hard drive and consequently on backup media.

QUESTION 56
You need to configure the distribution tracking application.
What should you do?

A. Map each role to a single upgrade domain to optimize resource utilization.
B. Design all services as stateless services.
C. Configure operations to queue when a role reaches its capacity.
D. Configure multiple worker roles to run on each virtual machine.

Answer: D
Explanation:
DistributionTracking
Trey Research has a web application named Distribution!racking. This application constantly collects realtime data that tracks worldwide distribution points to customer retail sites. This data is available to customers at all times. The company wants to ensure that the distribution tracking data is stored at a location that is geographically close to the customers who will be using the information. The system must continue running in the event of VM failures without corrupting data. The system is processor intensive and should be run in a multithreading environment.

QUESTION 57
Hotspot Question
You need to design a data storage strategy for each application.
In the table below, identify the strategy that you should use for each application. Make only one selection in each column.

Strategy	Human Resources Application	Metrics Application
Create separate SQL databases on individual virtual machines and partition appropriately.	○	○
Migrate the existing SQL database to a larger virtual machine.	○	○
Migrate the existing data to Azure table storage in the cloud.	○	○

Answer:

Strategy	Human Resources Application	Metrics Application
Create separate SQL databases on individual virtual machines and partition appropriately.	●	○
Migrate the existing SQL database to a larger virtual machine.	○	○
Migrate the existing data to Azure table storage in the cloud.	○	●

Explanation:
* Scenario:
/ HRApp
The company has a human resources (HR) application named HRApp that stores data in an onpremises SQL Server database.
The data must remain on-premises and cannot be stored in the cloud.
The human resources data is used by all business offices, and each office requires access to the entire database.
/ Metrics application
Data is stored on an on-premises SQL Server database, but this data should be moved to the cloud.

Case Study 3 - Contoso, Ltd (Question 58 - Question 62)

Background
Overview
Contoso, Ltd., manufactures and sells golf clubs and golf balls. Contoso also sells golf accessories under the Contoso Golf and Odyssey brands worldwide.
Most of the company's IT infrastructure is located in the company's Carlsbad, California, headquarters. Contoso also has a sizable third-party colocation datacenter that costs the company USD $30,000 to $40,000 a month. Contoso has other servers scattered around the United States.

Contoso, Ltd., has the following goals:
Move many consumer-facing websites, enterprise databases, and enterprise web services to Azure.
Improve the performance for customers and resellers who are access company websites from around the world.
Provide support for provisioning resources to meet bursts of demand. Consolidate and improve the utilization of website- and database-hosting resources.
Avoid downtime, particularly that caused by web and database server updating. Leverage familiarity with Microsoft server management tools.

Infrastructure
Contoso's datacenters are filled with dozens of smaller web servers and databases that run on under-utilized hardware. This creates issues for data backup. Contoso currently backs up data to tape by using System Center Data Protection Manager. System Center Operations Manager is not deployed in the enterprise.

All of the servers are expensive to acquire and maintain, and scaling the infrastructure takes significant time. Contoso conducts weekly server maintenance, which causes downtime for some of its global offices. Special events, such as high-profile golf tournaments, create a large increase in site traffic. Contoso has difficulty scaling the web- hosting environment fast enough to meet these surges in site traffic.

Contoso has resellers and consumers in Japan and China. These resellers must use applications that run in a datacenter that is located in the state of Texas, in the United States. Because of the physical distance, the resellers experience slow response times and downtime.

Business Requirements
Management and Performance
Management
Web servers and databases must automatically apply updates to the operating system and products.
Automatically monitor the health of worldwide sites, databases, and virtual machines.
Automatically back up the website and databases. Manage hosted resources by using on-premises tools.

Performance
The management team would like to centralize data backups and eliminate the use of tapes.
The website must automatically scale without code changes or redeployment. Support changes in service tier without reconfiguration or redeployment. Site-hosting must automatically scale to accommodate data bandwidth and number of connections.
Scale databases without requiring migration to a larger server. Migrate business critical applications to Azure. Migrate databases to the cloud and centralize databases where possible.

Business Continuity and Support
Business Continuity
Minimize downtime in the event of regional disasters. Recover data if unintentional modifications or deletions are discovered. Run the website on multiple web server instances to minimize

downtime and support a high service level agreement (SLA).

Connectivity
Allow enterprise web services to access data and other services located on- premises. Provide and monitor lowest latency possible to website visitors. Automatically balance traffic among all web servers. Provide secure transactions for users of both legacy and modern browsers. Provide automated auditing and reporting of web servers and databases. Support single sign-on from multiple domains.

Development Environment
You identify the following requirements for the development environment:
- Support the current development team's knowledge of Microsoft web development and SQL Service tools.
- Support building experimental applications by using data from the Azure deployment and on-premises data sources.
- Mitigate the need to purchase additional tools for monitoring and debugging.
- System designers and architects must be able to create custom Web APIs without requiring any coding.
- Support automatic website deployment from source control.
- Support automated build verification and testing to mitigate bugs introduced during builds.
- Manage website versions across all deployments.
- Ensure that website versions are consistent across ail deployments.

Technical Requirement
Management and Performance
Management
Use build automation to deploy directly from Visual Studio. Use build-time versioning of assets and builds/releases. Automate common IT tasks such as VM creation by using Windows PowerShell workflows.
Use advanced monitoring features and reports of workloads in Azure by using existing Microsoft tools.

Performance
Websites must automatically load balance across multiple servers to adapt to varying traffic. In production, websites must run on multiple instances. First-time published websites must be published by using Visual Studio and scaled to a single instance to test publishing.
Data storage must support automatic load balancing across multiple servers. Websites must adapt to wide increases in traffic during special events. Azure virtual machines (VMs) must be created in the same datacenter when applicable.

Business Continuity and Support
Business Continuity
Automatically co-locate data and applications in different geographic locations. Provide real-time reporting of changes to critical data and binaries. Provide real-time alerts of security exceptions. Unwanted deletions or modifications of data must be reversible for up to one month, especially in business critical applications and databases. Any cloud-hosted servers must be highly available.

Enterprise Support
The solution must use stored procedures to access on-premises SQL Server data from Azure. A debugger must automatically attach to websites on a weekly basis. The scripts that handle the configuration and setup of debugging cannot work if there is a delay in attaching the debugger.

QUESTION 58

Drag and Drop Question
You need to deploy the virtual machines to Azure.
Which four Azure PowerShell scripts should you run in sequence? To answer, move the appropriate scripts from the list of scripts to the answer area and arrange them in the correct order.

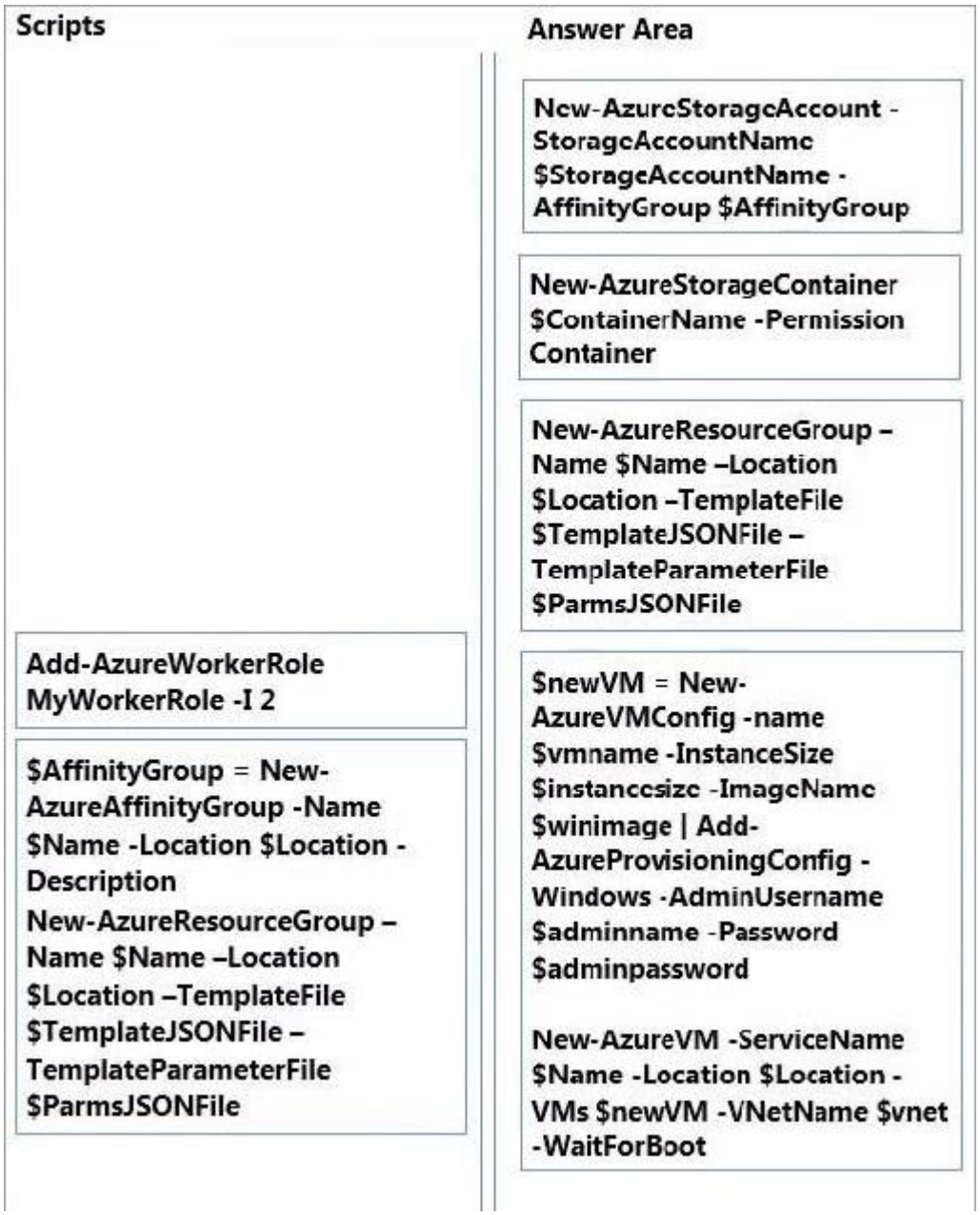
Scripts

- New-AzureStorageContainer $ContainerName -Permission Container
- New-AzureStorageAccount -StorageAccountName $StorageAccountName -AffinityGroup $AffinityGroup
- New-AzureResourceGroup –Name $Name –Location $Location –TemplateFile $TemplateJSONFile –TemplateParameterFile $ParmsJSONFile
- Add-AzureWorkerRole MyWorkerRole -I 2
- $AffinityGroup = New-AzureAffinityGroup -Name $Name -Location $Location -Description
  New-AzureResourceGroup –Name $Name –Location $Location –TemplateFile $TemplateJSONFile –TemplateParameterFile $ParmsJSONFile
- $newVM = New-AzureVMConfig -name $vmname -InstanceSize $instancesize -ImageName $winimage | Add-AzureProvisioningConfig -Windows -AdminUsername $adminname -Password $adminpassword

  New-AzureVM -ServiceName $Name -Location $Location -VMs $newVM -VNetName $vnet -WaitForBoot

Answer Area

Answer:



QUESTION 59
You need to recommend a solution for publishing one of the company websites to Azure and configuring it for remote debugging.
Which two actions should you perform? Each correct answer presents part of the solution.

A. From Visual Studio, attach the debugger to the solution.
B. Set the application logging level to Verbose and enable logging.
C. Set the Web Server logging level to Information and enable logging.
D. Set the Web Server logging level to Verbose and enable logging.
E. From Visual Studio, configure the site to enable Debugger Attaching and then publish the site.

Answer: AE
Explanation:
https://azure.microsoft.com/en-us/documentation/articles/web-sites-dotnet-troubleshoot-visual-studio/

QUESTION 60
Drag and Drop Question
You need to recommend network connectivity solutions for the experimental applications.
What should you recommend? To answer, drag the appropriate solution to the correct network connection requirements. Each solution may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

Solutions

- ExpressRoute
- point-to-site VPN
- site-to-site VPN

Answer Area

Network connection requirements	Solution
A dedicated connection between one on-premises location and its development environment within Azure	Solution
Encrypted Internet connection between one developer's server and the development environment within Azure	Solution
Encrypted Internet connection between one on-premises location and its development environment within Azure	Solution
Most secure, highest bandwidth, lowest latency option for connecting an on-premises network to Azure	Solution

Answer:

Solutions

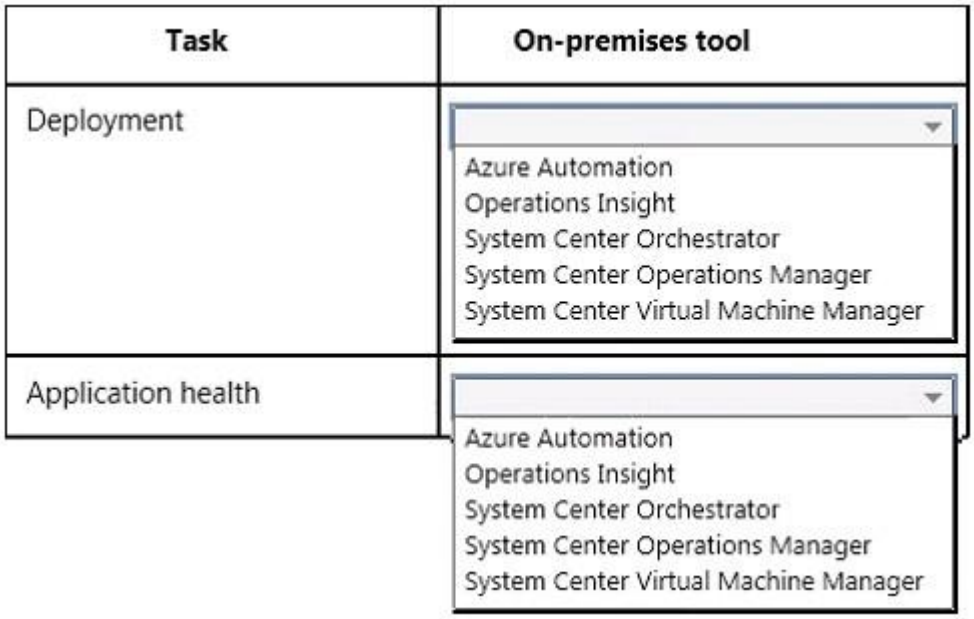
- ExpressRoute
- point-to-site VPN
- site-to-site VPN

Answer Area

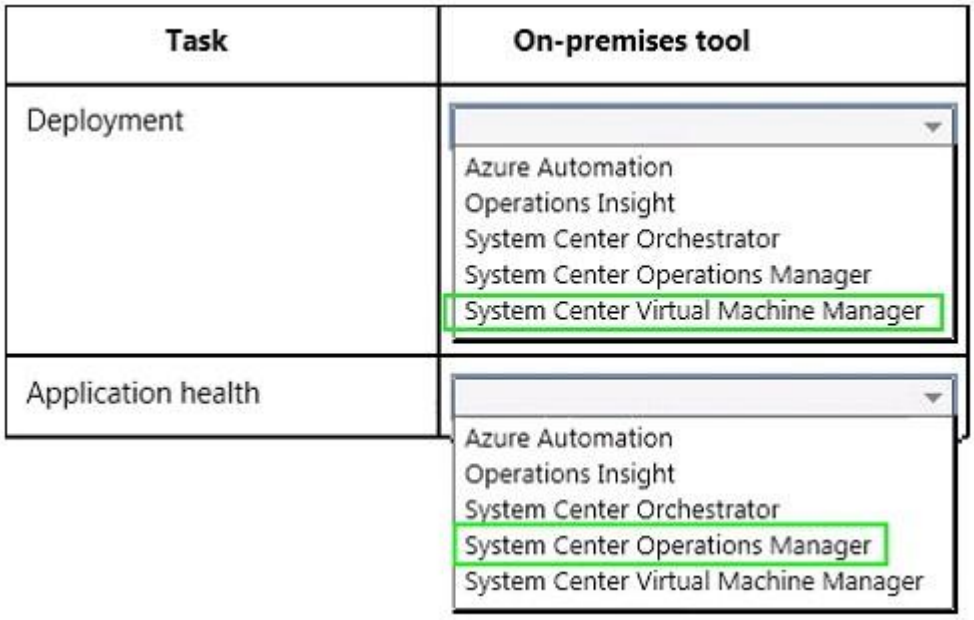
Network connection requirements	Solution
A dedicated connection between one on-premises location and its development environment within Azure	ExpressRoute
Encrypted Internet connection between one developer's server and the development environment within Azure	point-to-site VPN
Encrypted Internet connection between one on-premises location and its development environment within Azure	site-to-site VPN
Most secure, highest bandwidth, lowest latency option for connecting an on-premises network to Azure	ExpressRoute

QUESTION 61

Hotspot Question
You need implement tools at the client's location for monitoring and deploying Azure resources. Which tools should you use? To answer, select the appropriate on-premises tool for each task in the answer area.



Answer:



Explanation:
* System Center Virtual Machine Manager (SCVMM) enables rapid provisioning of new virtual machines by the administrator and end users using a self-service provisioning tool.
* System Center Operations Manager (SCOM) is a cross-platform data center management system for operating systems and hypervisors. It uses a single interface that shows state, health

and performance information of computer systems. It also provides alerts generated according to some availability, performance, configuration or security situation being identified.
The basic idea is to place a piece of software, an agent, on the computer to be monitored. The agent watches several sources on that computer, including the Windows Event Log, for specific events or alerts generated by the applications executing on the monitored computer.
* Scenario:
Leverage familiarity with Microsoft server management tools.
Manage hosted resources by using on-premises tools.
Mitigate the need to purchase additional tools for monitoring and debugging.
Use advanced monitoring features and reports of workloads in Azure by using existing Microsoft tools.
http://en.wikipedia.org/wiki/System_Center_Operations_Manager

QUESTION 62
You need to configure availability for the virtual machines that the company is migrating to Azure. What should you implement?

A. Traffic Manager
B. Express Route
C. Update Domains
D. Cloud Services

Answer: C
Explanation:
https://azure.microsoft.com/en-us/documentation/articles/virtual-machines-manage-availability/

Case Study 4 - Lucerne Publishing (Question 63 - Question 68)

Background
Overview
Lucerne Publishing creates, stores, and delivers online media for advertising companies. This media is streamed to computers by using the web, and to mobile devices around the world by using native applications. The company currently supports the iOS, Android, and Windows Phone 8.1 platform.
Lucerne Publishing uses proprietary software to manage its media workflow. This software has reached the end of its lifecycle. The company plans to move its media workflows to the cloud.
Lucerne Publishing provides access to its customers, who are third-party companies, so that they can download, upload, search, and index media that is stored on Lucerne Publishing servers.

Apps and Applications
Lucerne Publishing develops the applications that customers use to deliver media.
The company currently provides the following media delivery applications:

```
Lucerne Media W - a web application that delivers media by using any
browser
Lucerne Media M - a mobile app that delivers media by using Windows
Phone 8.1
Lucerne Media A - a mobile app that delivers media by using an iOS
device
Lucerne Media N - a mobile app that delivers media by using an Android
device
Lucerne Media D - a desktop client application that customer's install
on their local computer
```

Business Requirements

Lucerne Publishing's customers and their consumers have the following requirements:
Access to media must be time-constricted once media is delivered to a consumer. The time required to download media to mobile devices must be minimized. Customers must have 24-hour access to media downloads regardless of their location or time zone.
Lucerne Publishing must be able to monitor the performance and usage of its customer-facing app.
Lucerne Publishing wants to make its asset catalog searchable without requiring a database redesign.
Customers must be able to access all data by using a web application. They must also be able to access data by using a mobile app that is provided by Lucerne Publishing.
Customers must be able to search for media assets by key words and media type. Lucerne Publishing wants to move the asset catalog database to the cloud without formatting the source data.

Other Requirements
Development
Code and current development documents must be backed up at all times. All solutions must be automatically built and deployed to Azure when code is checked in to source control.

Network Optimization
Lucerne Publishing has a .NET web application that runs on Azure. The web application analyzes storage and the distribution of its media assets. It needs to monitor the utilization of the web application. Ultimately, Lucerne Publishing hopes to cut its costs by reducing data replication without sacrificing its quality of service to its customers. The solution has the following requirements:
- Optimize the storage location and amount of duplication of media.
- Vary several parameters including the number of data nodes and the distance from node to customers.
- Minimize network bandwidth.
- Lucerne Publishing wants be notified of exceptions in the web application.

Technical Requirements
Data Mining
Lucerne Publishing constantly mines its data to identify customer patterns. The company plans to replace the existing on-premises cluster with a cloud-based solution. Lucerne Publishing has the following requirements:

Virtual machines:
- The data mining solution must support the use of hundreds to thousands of processing cores.
- Minimize the number of virtual machines by using more powerful virtual machines.
- Each virtual machine must always have eight or more processor cores available.
- Allow the number of processor cores dedicated to an analysis to grow and shrink automatically based on the demand of the analysis.
- Virtual machines must use remote memory direct access to improve performance.

Task scheduling:
- The solution must automatically schedule jobs.
- The scheduler must distribute the jobs based on the demand and available resources.

Data analysis results:

The solution must provide a web service that allows applications to access the results of analyses.

Other Requirements
Feature Support
Ad copy data must be searchable in full text.
Ad copy data must indexed to optimize search speed. Media metadata must be stored in Azure Table storage. Media files must be stored in Azure BLOB storage. The customer-facing website must have access to all ad copy and media. The customer-facing website must automatically scale and replicate to locations around the world.
Media and data must be replicated around the world to decrease the latency of data transfers.
Media uploads must have fast data transfer rates (low latency) without the need to upload the data offline.

Security
Customer access must be managed by using Active Directory. Media files must be encrypted by using the PlayReady encryption method. Customers must be able to upload media quickly and securely over a private connection with no opportunity for internet snooping.

QUESTION 63
You need to ensure that the website scales.
What should you do?

A. Deploy Traffic Manager and configure it to route user traffic to specified endpoints to other Azure datacenters.
B. Enter multiple DNS entries in each virtual network to route requests to other Azure datacenters.
C. Set up a new Azure datacenter to Azure datacenter VPN to enable the solution to communicate across regions.
D. Use a virtual network to route network traffic in a single Azure datacenter.

Answer: A
Explanation:
Azure Traffic Manager: Traffic Manager allows you to load balance incoming traffic across multiple, hosted Azure services.
You can load balance traffic for services running in the same datacenter or across different datacenters around the world.
By effectively managing traffic, you can ensure high performance, availability, and resiliency for your applications.

QUESTION 64
You need to analyze Lucerne's performance monitoring solution.
Which three applications should you monitor? Each correct answer presents a complete solution.

A. The Lucerne Media-D application
B. The data mining application
C. The Lucerne Media-W application
D. The Lucerne Media-M app
E. The Lucerne Media-N app

Answer: CDE
Explanation:
Monitor the web application and the mobile apps.

C: Lucerne Media W - a web application that delivers media by using any browser
D: Lucerne Media M - a mobile app that delivers media by using Windows Phone 8.1
E: Lucerne Media N - a mobile app that delivers media by using an Android device
* Scenario:
/ Lucerne Publishing must be able to monitor the performance and usage of its customer-facing app.
/ Customers must be able to access all data by using a web application. They must also be able to access data by using a mobile app that is provided by Lucerne Publishing.

QUESTION 65
You need to configure the deployment of the storage analysis application.
What should you do?

A. Create a new Mobile Service.
B. Configure the deployment from source control.
C. Add a new deployment slot.
D. Turn on continuous integration.

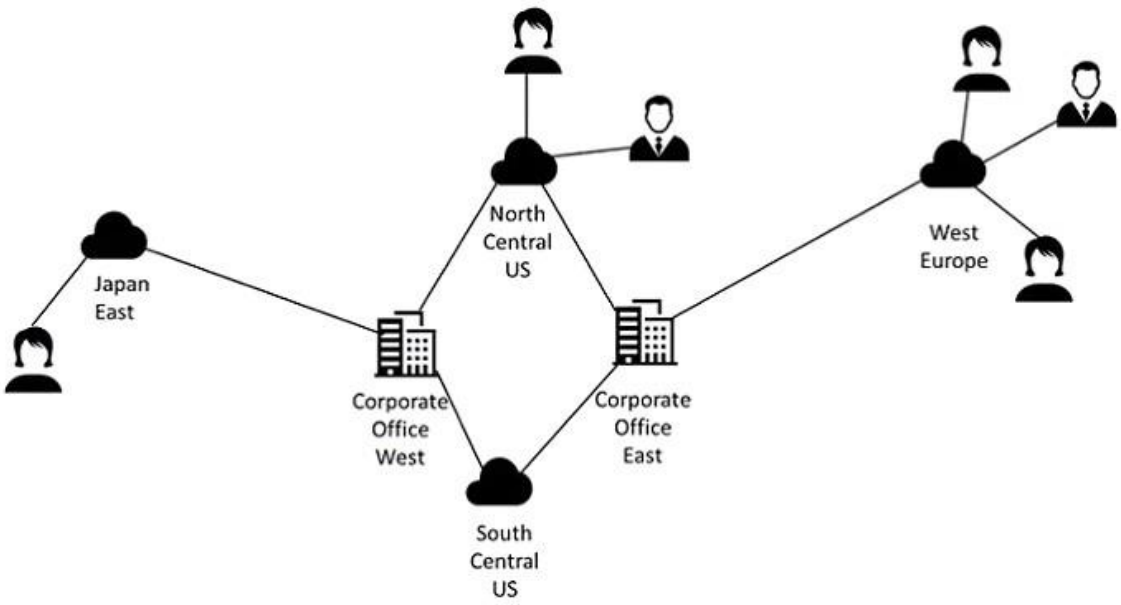
Answer: B
Explanation:
Scenario: Data analysis results:
The solution must provide a web service that allows applications to access the results of analyses.

QUESTION 66
You need to recommend an appropriate solution for the data mining requirements.
Which solution should you recommend?

A. Design a schedule process that allocates tasks to multiple virtual machines, and use the Azure Portal to create new VMs as needed.
B. Use Azure HPC Scheduler Tools to schedule jobs and automate scaling of virtual machines.
C. Use Traffic Manager to allocate tasks to multiple virtual machines, and use the Azure Portal to spin up new virtual machines as needed.
D. Use Windows Server HPC Pack on-premises to schedule jobs and automate scaling of virtual machines in Azure.

Answer: B
Explanation:
It is not A or C because it involves manually scaling. Requirements are for automatic scaling - "Allow the number of processor cores dedicated to an analysis to grow and shrink automatically based on the demand of the analysis."
It is not D as it is an on-premises solution. - "The company plans to replace the existing on-premises cluster with a cloud-based solution."
B fits as Azure HPC provides Virtual Machines with RDMA and 8 or more processor cores.
https://azure.microsoft.com/en-us/documentation/articles/virtual-machines-a8-a9-a10-a11-specs/

QUESTION 67
Hotspot Question
The company has two corporate offices. Customers will access the websites from datacenters around the world.



You need to architect the global website strategy to meet the business requirements. Use the drop-down menus to select the answer choice that answers each question.

Answer Area

'here should you deploy the websites?

- South Central US
- Corporate Office West and Corporate Office East
- East Asia, North Central US, and West Europe

'here should you store the media?

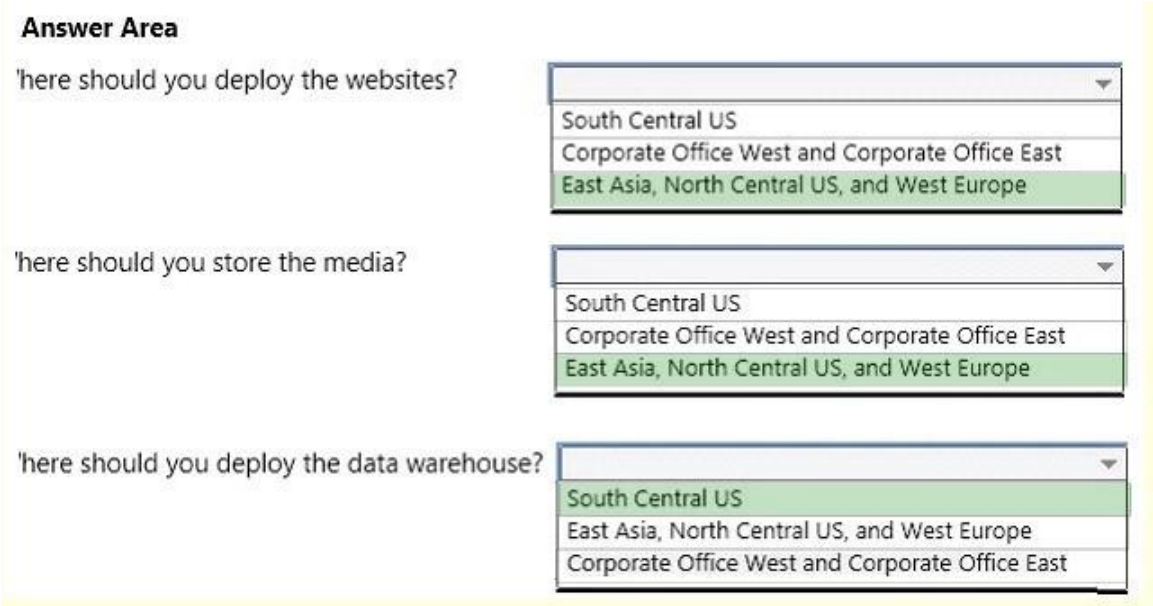
- South Central US
- Corporate Office West and Corporate Office East
- East Asia, North Central US, and West Europe

'here should you deploy the data warehouse?

- South Central US
- East Asia, North Central US, and West Europe
- Corporate Office West and Corporate Office East

Answer:

Answer Area

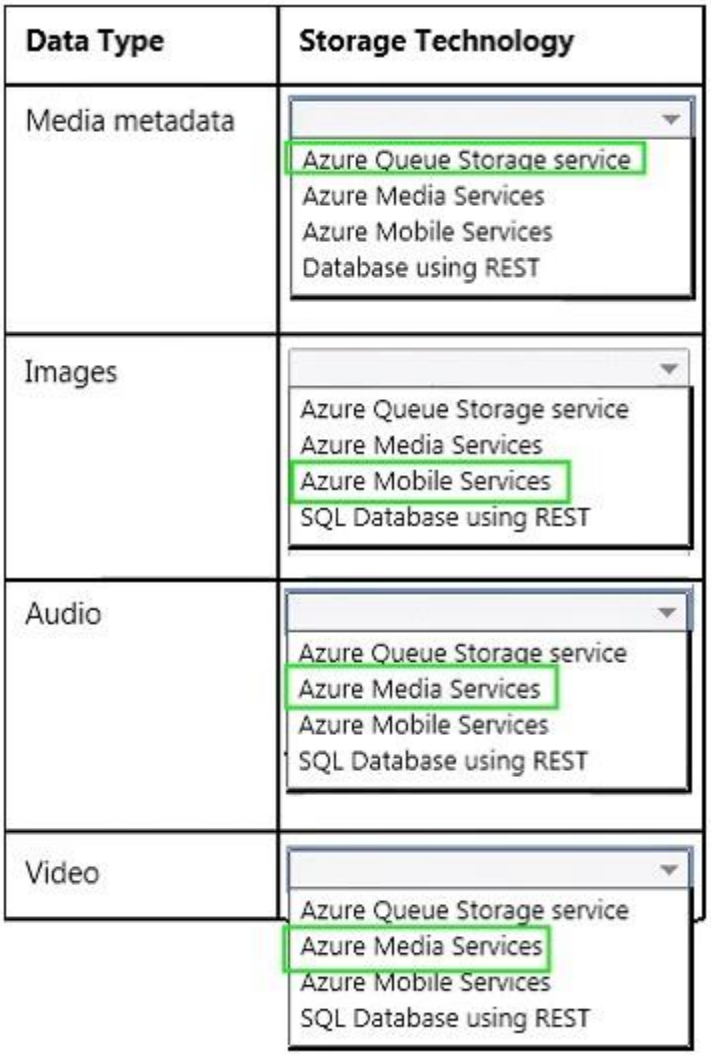


Explanation:
Websites and Media should be deployed to East Asia, North Central US and West Europe.
- The customer-facing website must automatically scale and replicate to locations around the world.
- Media and data must be replicated around the world to decrease the latency of data transfers.
Deploy data warehouse in South Central US Azure Datacenter where both corporate offices can access

QUESTION 68
Hotspot Question
You need to recommend strategies for storing data.
Which services should you recommend? To answer, select the appropriate storage technology for each data type in the answer area.

Data Type	Storage Technology
Media metadata	Azure Queue Storage service Azure Media Services Azure Mobile Services Database using REST
Images	Azure Queue Storage service Azure Media Services Azure Mobile Services SQL Database using REST
Audio	Azure Queue Storage service Azure Media Services Azure Mobile Services SQL Database using REST
Video	Azure Queue Storage service Azure Media Services Azure Mobile Services SQL Database using REST

Answer:



Explanation:
* Media metadata: Azure Queue Storage Service
Scenario: Media metadata must be stored in Azure Table storage.
Azure Queues provide a uniform and consistent programming model across queues, tables, and BLOBs – both for developers and for operations teams.
* Images: Azure Mobile Services
Scenario: Media files must be stored in Azure BLOB storage.
You can use Azure Mobile Services to access images from mobile devices.
* Audio: Azure Media Services
* Video: Azure Media Services
Microsoft Azure Media Services is an extensible cloud-based platform that enables developers to build scalable media management and delivery applications. Media Services is based on REST APIs that enable you to securely upload, store, encode and package video or audio content for both ondemand and live streaming delivery to various clients (for example, TV, PC, and mobile devices).
https://azure.microsoft.com/en-us/documentation/articles/media-services-overview/

Case Study 5 - Northwind traders (Question 69 - Question 74)

Background

Overview
Northwind Electric Cars is the premier provider of private, low-cost transportation in Denver. Northwind drivers are company employees who work together as a team. The founding partners believe that by hiring their drivers as employees, their drivers focus on providing a great customer experience. Northwind Electric Cars has a reputation for offering fast, reliable, and friendly service, due largely to their extensive network of drivers and their proprietary dispatching software named NorthRide.
Northwind Electric Cars drivers depend on frequent, automatic updates for the NorthRide mobile app. The Northwind management team is concerned about unplanned system downtime and slow connection speeds caused by high usage. Additionally, Northwind's in- house data storage solution is unsustainable because of the new influx of customer data that is retained. Data backups are made periodically on DVDs and stored on-premises at corporate headquarters.

Apps
NorthRide App
Northwind drivers use the NorthRide app to meet customer pickup requests. The app uses a GPS transponder in each Northwind vehicle and Bing Maps APIs to monitor the location of each vehicle in the fleet in real time. NorthRide allows Northwind dispatchers to optimize their driver coverage throughout the city.
When new customers call, the dispatcher enters their pickup locations into NorthRide. NorthRide identifies the closest available driver. The dispatcher then contacts the driver with the pick-up details. This process usually results in a pick-up time that is far faster than the industry average.
Drivers use NorthRide to track the number of miles they drive and the number of customers they transport. Drivers also track their progress towards their established goals, which are measured by using key performance indicators (KPIs).

NorthRide App 2.0
Northwind Electric Cars is growing quickly. New callers often wait for their calls to be answered because the dispatchers are contacting their drivers to arrange pickups for other customers.
To support the growth of the business, Northwind's development team completes an overhaul of the NorthRide system that it has named NorthRide 2.0. When a dispatcher enters a customer's pickup location, the address and driving directions are automatically sent to the driver who is closest to the customer's pickup location.
Drivers indicate their availability on the NorthRide mobile app and can view progress towards their KPI's in real time. Drivers can also record customer ratings and feedback for each pickup.

Business Requirements
Apps
NorthRideFinder App
Northwind Electric Cars needs a customer-facing website and mobile app that allows customers to schedule pickups. Customers should also be able to create profiles that will help ensure the customer gets a ride faster by storing customer information.

Predictor App
Northwind Electric Cars needs a new solution named Predictor. Predictor is an employee- facing mobile app. The app predicts periods of high usage and popular pickup locations and provides various ways to view this predictive data. Northwind uses this information to better distribute its drivers. Northwind wants to use the latest Azure technology to create this solution.

Other Requirements
On-premises data must be constantly backed up.
Mobile data must be protected from loss, even if connectivity with the backend is lost.
Dispatch offices need to have seamless access to both their primary data center and the applications and services that are hosted in the Azure cloud. Connectivity needs to be redundant to on-premises and cloud services, while providing a way for each dispatch office to continue to operate even if one or all of the connection options fail.

The management team requires that operational data is accessible 24/7 from any office location.

Technical Requirements
Apps and Website
NorthRide / NorthRideFinder Apps:
- The solution must support on-premises and Azure data storage.
- The solution must scale as necessary based on the current number of concurrent users.
- Customer pickup requests from NorthRideFinder must be asynchronous.
- The customer pickup request system will be high in volume, and each request will have a short life span.
- Data for NorthRideFinder must be protected during a loss of connectivity.
- NorthRide users must authenticate to the company's Azure Active Directory.

Northwind Public Website
- The customer website must use a WebJob to process profile images into thumbnails
- The customer website must be developed with lowest cost and difficulty in mind.
- The customer website must automatically scale to minimize response times for customers.

Other Requirements
Data Storage:
- The data storage must interface with an on-premises Microsoft SQL backend database.
- A disaster recovery system needs to be in place for large amounts of data that will backup to Azure.
- Backups must be fully automated and managed the Azure Management Portal.
- The recovery system for company data must use a hybrid solution to back up both the on-premises Microsoft SQL backend and any Azure storage.

Predictive Routing:
- An Azure solution must be used for prediction systems.
- Predictive analytics must be published as a web service and accessible by using the REST API.

Security:
- The NorthRide app must use an additional level of authentication other than the employee's password.
- Access must be secured in NorthRide without opening a firewall port.
- Company policy prohibits inbound connections from internet callers to the on- premises network.
- Customer usernames in NorthRideFinder cannot exceed 10 characters.
- Customer data in NorthRideFinder can be received only by the user ID that is associated with the data.

QUESTION 69
You need to recommend a technology for processing customer pickup requests.
Which technology should you recommend?

A. Notification hub
B. Queue messaging
C. Mobile Service with push notifications
D. Service Bus messaging

Answer: D
Explanation:
Azure Service Bus Queue
Web Roles and Worker Roles can directly communicate with each other. However, a more common pattern is to use a reliable messaging system such as Azure Service Bus Queue to pass messages between them.
cloud service role: A cloud service role is comprised of application files and a configuration. A cloud service can have two types of role:
web role: A web role provides a dedicated Internet Information Services (IIS) web-server used for hosting front-end web applications.
worker role: Applications hosted within worker roles can run asynchronous, long-running or perpetual tasks independent of user interaction or input

QUESTION 70
You need to recommend the appropriate technology to provide the predictive analytics for passenger pickup.
What should you do?

A. Use Power BI to analyze the traffic data and PowerPivot to categorize the results.
B. Use HDInsight to analyze the traffic data and write a .NET program to categorize the results.
C. Use Machine Learning Studio to create a predictive model and publish the results as a web service.
D. Use Hadoop on-premises to analyze the traffic and produce a report that shows high traffic zones.

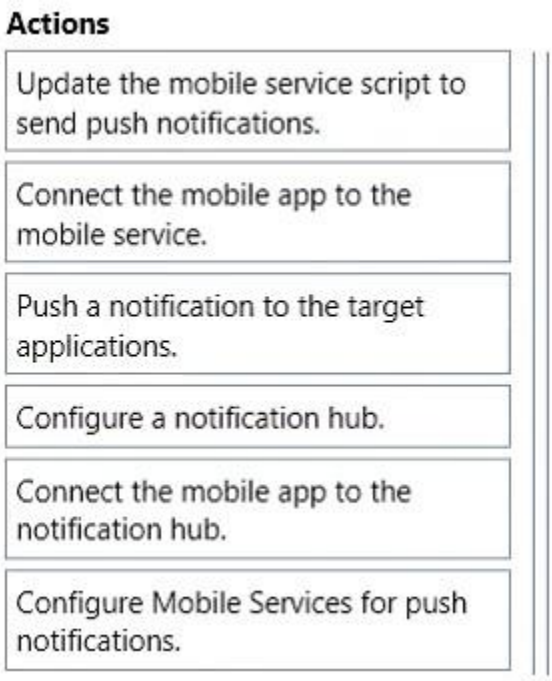
Answer: C
Explanation:
* Scenario: Predictive Routing:
/ An Azure solution must be used for prediction systems.
/ Predictive analytics must be published as a web service and accessible by using the REST API.
* Microsoft Azure Machine Learning Studio is a collaborative visual development environment that enables you to build, test, and deploy predictive analytics solutions that operate on your data. The Machine Learning service and development environment is cloud-based, provides compute resource and memory flexibility, and eliminates setup and installation concerns because you work through your web browser.
What is Azure Machine Learning Studio?
https://azure.microsoft.com/en-us/documentation/articles/machine-learning-what-is-ml-studio/

QUESTION 71
You need to design the authentication solution for the NorthRide app. Which solution should you use?

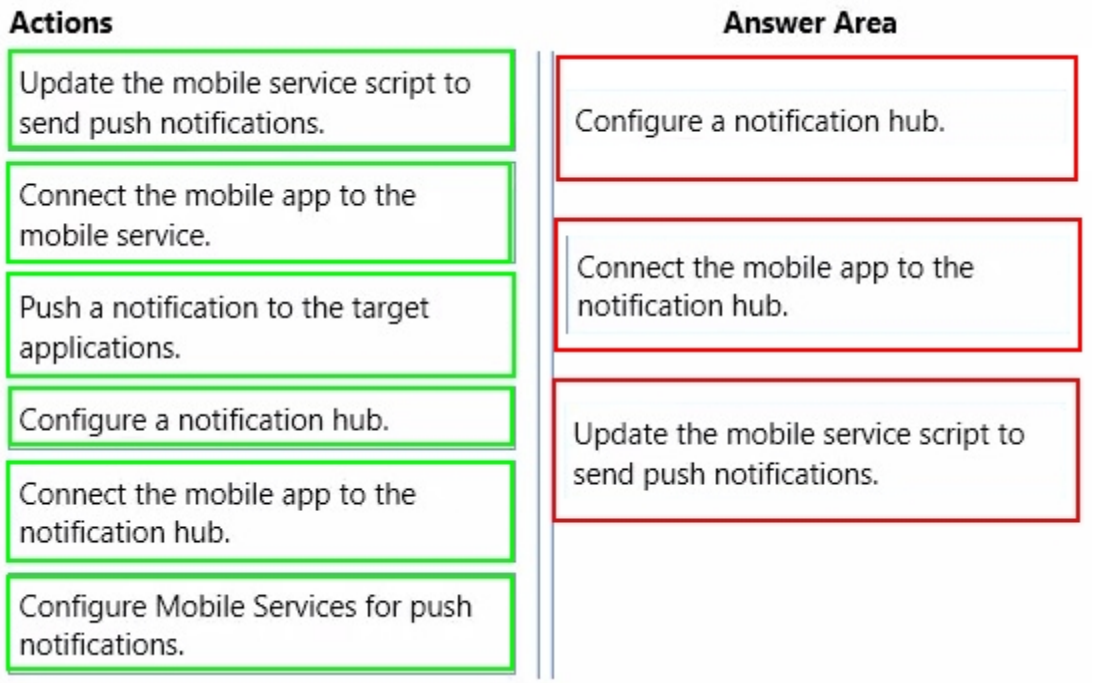
A. Azure Active Directory Basic with multi-factor authentication for the cloud and on- premises users.
B. Active Directory Domain Services with mutual authentication
C. Azure Active Directory Premium and add multi-factor authentication the for cloud users
D. Active Directory Domain Services with multi-factor authentication

Answer: C
Explanation:
* Scenario: The NorthRide app must use an additional level of authentication other than the employee's password.
* Azure Multi-Factor Authentication is the multi-factor authentication service that requires users to also verify sign-ins using a mobile app, phone call or text message. It is available to use with Azure Active Directory, to secure on-premise resources with the Azure Multi-Factor Authentication Server, and with custom applications and directories using the SDK.
Incorrect answers:
Not A: Azure Active Directory Basic does not support multi-factor authentication. Azure Active Directory Premium is required.
What is Azure Multi-Factor Authentication?
https://azure.microsoft.com/en-us/documentation/articles/multi-factor-authentication/
Azure Active Directory Pricing
http://azure.microsoft.com/en-gb/pricing/details/active-directory/

QUESTION 72
Drag and Drop Question
You need to design the notification service for the customer-facing mobile app.
Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

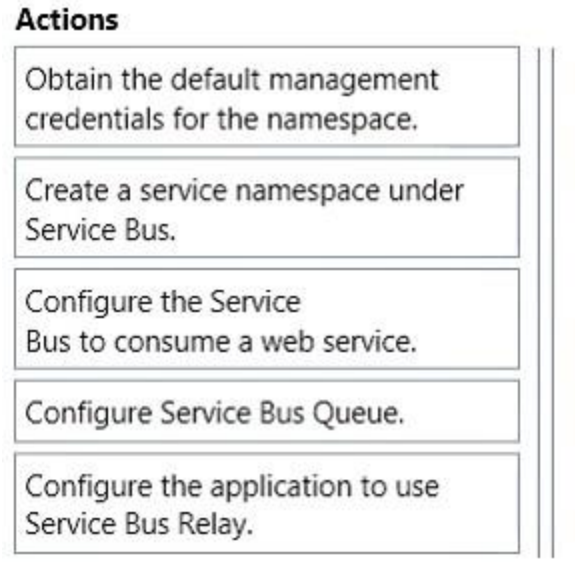


Answer:

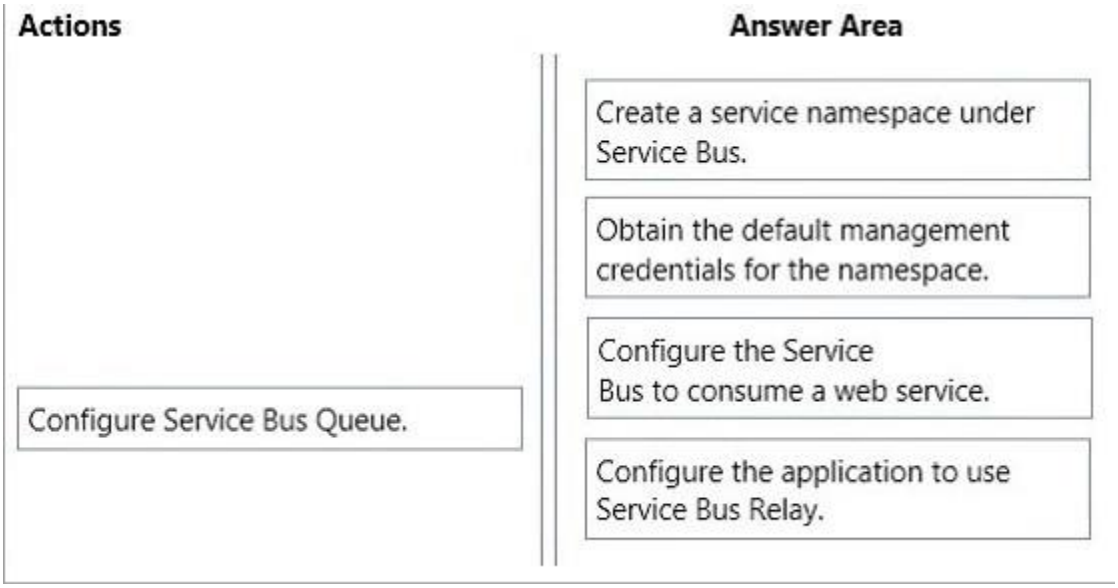


Explanation:
Azure Notification Hubs provide an easy-to-use infrastructure that enables you to send mobile push notifications from any backend (in the cloud or on-premises) to any mobile platform.
Configuration steps include:
1. Configure your Notification Hub
2. Connecting your app to the Notification Hub
3. Send notification from your back-end
You can send notifications using Notification Hubs from any back-end using the REST interface. You do this through a script, not a configuration of Mobile Services. Use Java or PHP for the script.
Getting Started with Notification Hubs
https://azure.microsoft.com/en-us/documentation/articles/notification-hubs-windows-storedotnet-get-started/#send-notification-from-your-back-end

QUESTION 73
Drag and Drop Question
You need to provide a data access solution for the NorthRide app.
Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



Answer:



Explanation:
Box 1: Create a service namespace under Service Bus
Box 2: Obtain the default management credentials for the namespace.
Box 3: Configure the Service Bus to consume a web service
Box 4: Configure the application to use Service Bus Relay
The Service Bus relay service enables you to build hybrid applications that run in both an Azure datacenter and your own on-premises enterprise environment. The Service Bus relay facilitates this by enabling you to securely expose Windows Communication Foundation (WCF) services that reside within a corporate enterprise network to the public cloud, without having to open a firewall connection, or require intrusive changes to a corporate network infrastructure.

QUESTION 74
You need to recommend a solution that meets the requirements for data storage for the

NorthRide app.
What should you include in the recommendation?

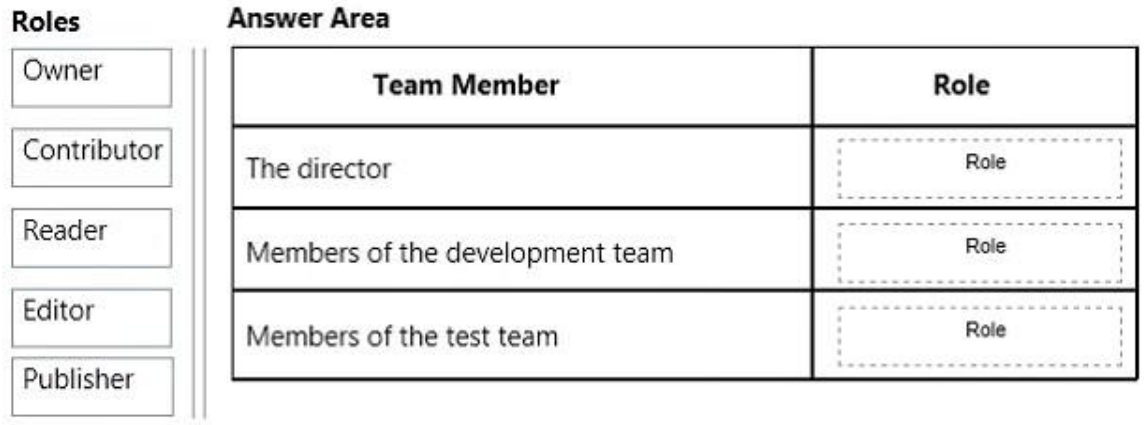
A. Azure Remote App
B. Azure Service Bus
C. Azure Connect
D. Azure SQL Database

Answer: D
Explanation:
AZURE SQL DATABASE
Each SQL Database has three database replicas running at any given time.
In addition, SQL Database provides an automatic “Point in Time Restore” feature, which automatically backs up your SQL database and retains the backups for 7 days for Basic tier, 14 days for Standard tier, and 35 days for Premium tier.
Another fault tolerance feature you get automatically is “geo-restore.” When backing up your databases, Azure stores the most recent daily backup of your database in a different geographical location.
In the event of a large-scale outage in a region, your data can be restored within 24 hours from another region. If you have more aggressive recovery requirements, you can use “Standard georeplication” or “Active geo-replication.” Standard geo-replication (available to Standard and Premium-tier users) creates additional secondary replicas in a different region than the region in which your database is deployed (this region is called a paired region). These replicas are offline, but they can be brought online for an application to fail-over to them in the event of a datacenter disruption. Active geo-replication (available to Premium-tier users) provides the most rapid recovery time by keeping four geo-replicated live secondaries.
You can also manually back up your databases.
- First, you can create transactional consistent copies of your databases to the same or different servers in the same or different regions.
- Second, you can use SQL Database Import and Export Service to export BACPACK files, which contain a logical copy of the schema as well as the data of a database. You can then import the file back to your database for disaster recovery.

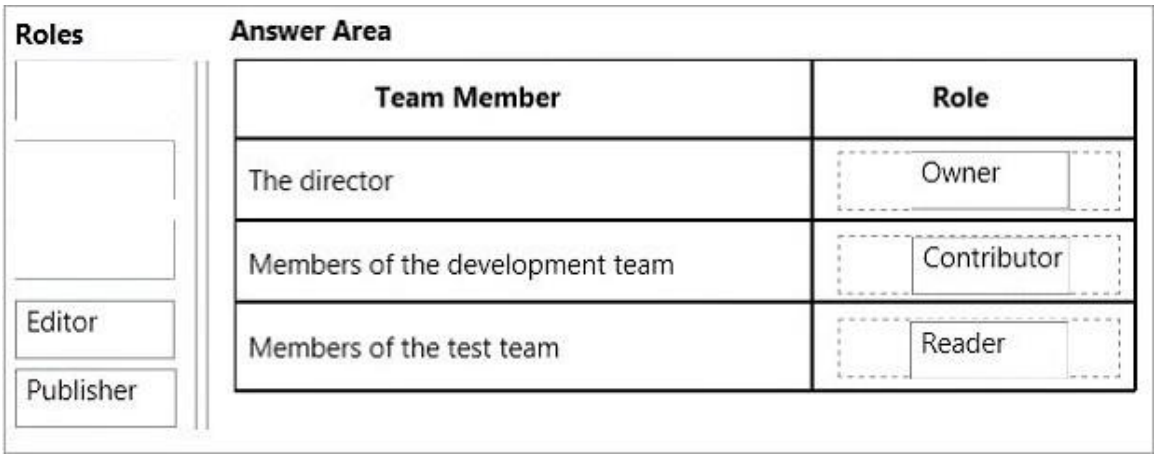
QUESTION 75
Drag and Drop Question
You are the Azure architect for an organization.
You are working with C-level management to assign Azure role-based access control roles to a team within the organization. A single director oversees two teams, a development team and a test team. The director is wholly responsible for the organization's Azure account, including billing, infrastructure, and access control.
The director is the only member of the team with the ability to alter access controls.
You have the following requirements:

- Members of the development team must be able to view or alter Azure infrastructure to support application development.
- Members of the test team must be able to view Azure infrastructure to support test cases.

You need to assign built-in Azure role-based access control roles to team members within the organization.
Which role should you assign to each team member? To answer, drag the appropriate role to the correct team member. Each role may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.



Answer:



Explanation:
Role-based access control in the Microsoft Azure portal
http://azure.microsoft.com/en-us/documentation/articles/role-based-access-control-configure/

QUESTION 76
You administer a cloud service.
You plan to host two web applications named contosoweb and contosowebsupport.
You need to ensure that you can host both applications and qualify for the Azure Service Level Agreement.
You want to achieve this goal while minimizing costs.
How should you host both applications?

A. in different web roles with two instances in each web role
B. in the same web role with two instances
C. in different web roles with one instance in each web role
D. in the same web role with one instance

Answer: B
Explanation:
A cloud service must have at least two instances of every role to qualify for the Azure Service Level Agreement, which guarantees external connectivity to your Internet-facing roles at least

99.95 percent of the time.
http://azure.microsoft.com/en-us/documentation/articles/cloud-services-what-is/

QUESTION 77
You deploy an application as a cloud service in Azure.
The application consists of five instances of a web role.
You need to move the web role instances to a different subnet.
Which file should you update?

A. Service definition
B. Diagnostics configuration
C. Service configuration
D. Network configuration

Answer: C

QUESTION 78
You manage an Azure virtual network that hosts 15 virtual machines (VMs) on a single subnet, which is used for testing a line of business (LOB) application.
The application is deployed to a VM named TestWebServiceVM.
You need to ensure that TestWebServiceVM always starts by using the same IP address.
You need to achieve this goal by using the least amount of administrative effort.
What should you do?

A. Use the Management Portal to configure TestWebServiceVM.
B. Use RDP to configure TestWebServiceVM.
C. Run the Set-AzureStaticVNetIP PowerShell cmdlet.
D. Run the Get-AzureReservedIP PowerShell cmdlet.

Answer: C
Explanation:
Specify a static internal IP for a previously created VM
If you want to set a static IP address for a VM that you previously created, you can do so by using the following cmdlets. If you already set an IP address for the VM and you want to change it to a different IP address, you'll need to remove the existing static IP address before running these cmdlets. See the instructions below to remove a static IP. For this procedure, you'll use the Update-AzureVM cmdlet. The Update-AzureVM cmdlet restarts the VM as part of the update process. The DIP that you specify will be assigned after the VM restarts. In this example, we set the IP address for VM2, which is located in cloud service StaticDemo.
Get-AzureVM -ServiceName StaticDemo -Name VM2 | Set-AzureStaticVNetIP -IPAddress 192.168.4.7 | Update-AzureVM
http://msdn.microsoft.com/en-us/library/azure/dn630228.aspx

QUESTION 79
You administer of a set of virtual machine (VM) guests hosted in Hyper-V on Windows Server 2012 R2.
The virtual machines run the following operating systems:

```
- Windows Server 2008
- Windows Server 2008 R2
- Linux (openSUSE 13.1)
```

All guests currently are provisioned with one or more network interfaces with static bindings and VHDX disks.
You need to move the VMs to Azure Virtual Machines hosted in an Azure subscription.
Which three actions should you perform? Each correct answer presents part of the solution.

A. Install the WALinuxAgent on Linux servers.
B. Ensure that all servers can acquire an IP by means of Dynamic Host Configuration Protocol (DHCP).
C. Upgrade all Windows VMs to Windows Server 2008 R2 or higher.
D. Sysprep all Windows servers.
E. Convert the existing virtual disks to the virtual hard disk (VHD) format.

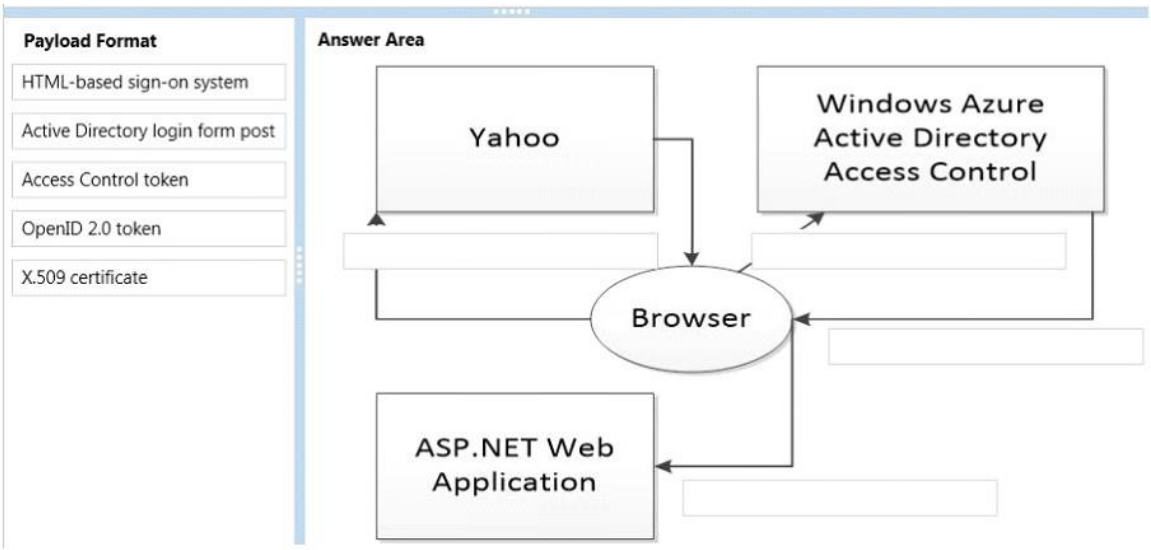
Answer: ACE

QUESTION 80
A company creates an API and makes it accessible on an Azure website. External partners use the API occasionally. The website uses the Standard web hosting plan.
Partners report that the first API call in a sequence of API calls occasionally takes longer than expected to run. Subsequent API calls consistently perform as expected.
You need to ensure that all API calls perform consistently.
What should you do?

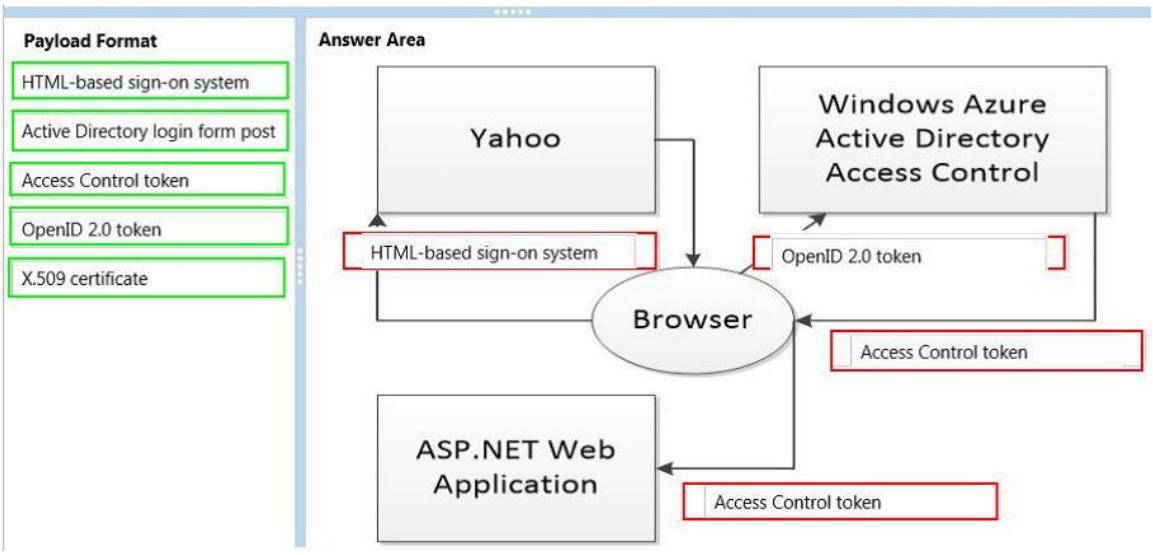
A. Configure the website to use the Basic web hosting plan.
B. Enable Always On support.
C. Configure the website to automatically scale.
D. Add a trigger to the web.config file for the website that causes the website to recycle periodically.

Answer: B

QUESTION 81
Drag and Drop Question
You are converting an existing ASP.NET web application to use the Azure Active Directory (AD) Access Control service for authentication. The application will authenticate users by using their Yahoo account credentials.
You need to determine the correct payload for each stage of the authentication process.
What should you do? To answer, drag the appropriate payload format to the correct location on the dialog box. Each payload format may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

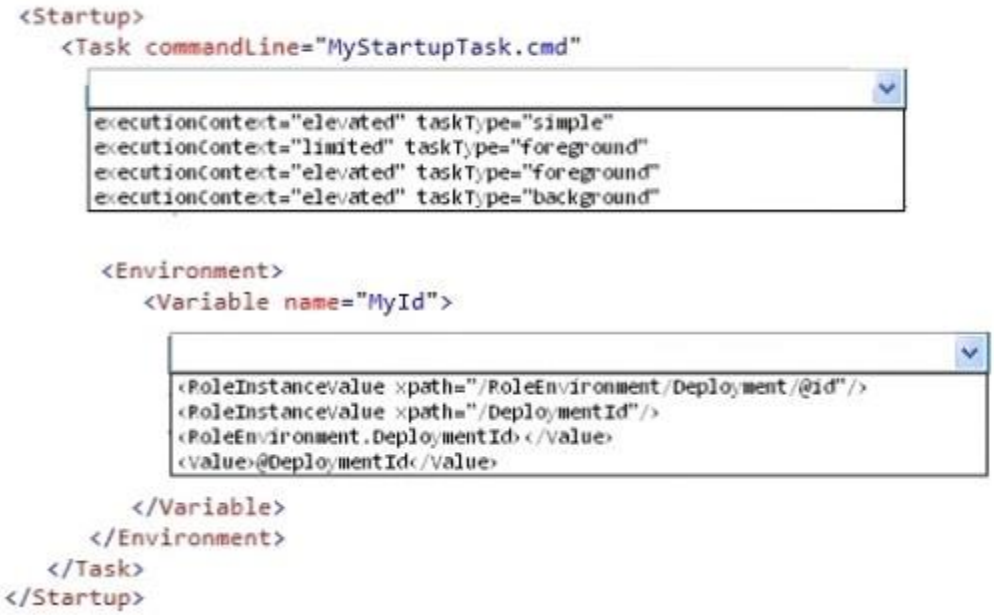


Answer:



QUESTION 82
Hotspot Question
You have a cloud service that runs an external process that is named MyStartupTask.cmd.
The cloud service runs this external process when the web role starts.
The external process writes information to the Windows registry.
You set the value of an environment variable named MyID to the deployment ID for the current web role instance.
The external process must complete writing the information to the Windows registry before the web role starts to accept web traffic.
You need to configure the cloud service.
How should you complete the relevant markup? To answer, select the appropriate option or options in the answer area.

Answer Area



Answer:

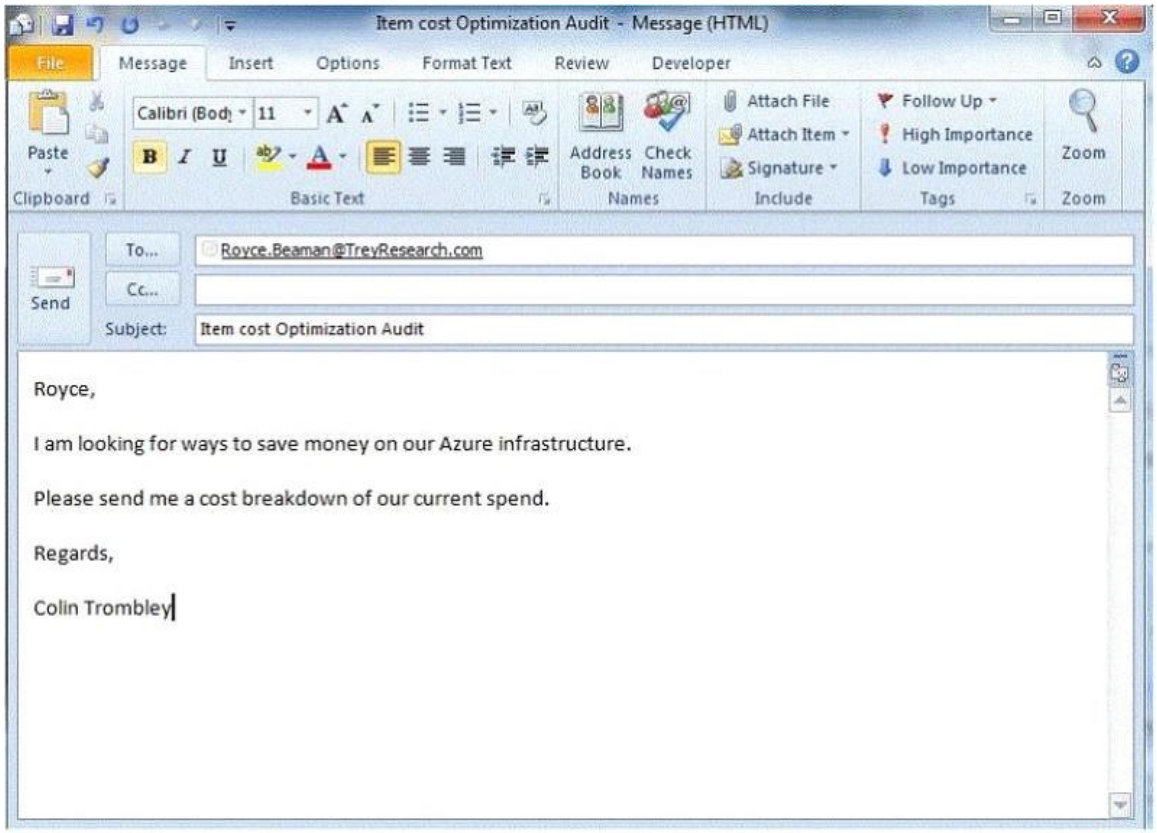
Answer Area

QUESTION 83
Hotspot Question
You have an Azure SQL Database named Contosodb. Contosodb is running in the Standard/S2 tier and has a service level objective of 99 percent.

You review the service tiers in Microsoft Azure SQL Database as well as the results of running performance queries for the usage of the database for the past week as shown in the exhibits. (Click the Exhibits button.)

Average CPU Utilization In Percent	Maximum CPU Utilization In Percent	Average Physical Data Read Utilization In Percent	Maximum Physical Data Read Utilization In Percent	Average Log Write Utilization In Percent	Maximum Log Write Utilization In Percent
23.4	93.1	21.0	48.0	21.7	61.0

CPU Fit Percent	Log Write Fit Percent	Physical Data Read Fit Percent
99.7	99.8	99.6



For each of the following statements, select Yes if the statement is true. Otherwise, select No.

	Yes	No
The database can be moved to the Basic tier without compromising performance.	○	○
The database can be moved to the Standard/ S1 tier without compromising performance.	○	○
The database must be moved to the Premium/P1 tier to satisfy the service level objective.	○	○

Answer:

	Yes	No
The database can be moved to the Basic tier without compromising performance.	○	◉
The database can be moved to the Standard/ S1 tier without compromising performance.	◉	○
The database must be moved to the Premium/P1 tier to satisfy the service level objective.	○	◉

QUESTION 84
You manage a virtual Windows Server 2012 web server that is hosted by an on-premises Windows Hyper-V server. You plan to use the virtual machine (VM) in Azure.
You need to migrate the VM to Azure Storage to add it to your repository.
Which Azure Power Shell cmdlet should you use?

A. Import-AzureVM
B. New-AzureVM
C. Add-AzureDisk
D. Add-AzureWebRole
E. Add-AzureVhd

Answer: C
Explanation:
http://msdn.microsoft.com/en-us/library/azure/dn495252.aspx

QUESTION 85
Your company network has two physical locations configured in a geo-clustered environment.
You create a Blob storage account in Azure that contains all the data associated with your company.
You need to ensure that the data remains available in the event of a site outage.
Which storage option should you enable?

A. Locally redundant storage
B. Geo-redundant storage
C. Zone-redundant storage
D. Read-only geo-redundant storage

Answer: D
Explanation:
Introducing Read-only Access to Geo Redundant Storage (RA-GRS):
RA-GRS allows you to have higher read availability for your storage account by providing "read only" access to the data replicated to the secondary location. Once you enable this feature, the secondary location may be used to achieve higher availability in the event the data is not available in the primary region. This is an "opt-in" feature which requires the storage account be geo-replicated.

QUESTION 86
You manage several Azure virtual machines (VMs).
You create a custom image to be used by employees on the development team.
You need to ensure that the custom image is available when you deploy new servers.
Which Azure Power Shell cmdlet should you use?

A. Update-AzureVMImage
B. Add-AzureVhd
C. Add-AzureVMImage
D. Update-AzureDisk
E. Add-AzureDataDisk

Answer: C
Explanation:
The Add-AzureVMImage cmdlet adds an operating system image to the image repository.
The image should be a generalized operating system image, using either Sysprep for Windows or, for Linux, using the appropriate tool for the distribution.
Example
This example adds an operating system image to the repository.
Windows PowerShell
C:\PS>Add-AzureVMImage -ImageName imageName -MediaLocation
http://yourstorageaccount.blob.core.azure.com/container/sampleImage.vhd -Label

QUESTION 87
You administer an Azure Storage account named contosostorage.
The account has a blob container to store image files.
A user reports being unable to access an image file.
You need to ensure that anonymous users can successfully read image files from the container.
Which log entry should you use to verify access?

A.
```
1.0;2014-06-
19T01:33:54.0926521Z;GetBlob;AnonymousSuccess;201;197;54;
anonymous;contosostorage;contosostorage;blob;"https://
contosostorage.blob.core.windows.net/images/00001.jpg";"/
 contosostorage/images/00001.jpg";a200be85-1c98-4dd9-918e-
f13d8c0538e0;0;192.100.0.102:4362;2014-02-14;460;23;225;0;23;"DrPO6z1f00SCsomhaf
+J/A==";"DrPO6z1f00SCsomhaf
+J/A==";"&quot;0x8D15975AA456EA4&quot;";Thursday, 19-Jun-14 01:33:53 GMT;;"WA-Storage/4.0.1 (.NET CLR
4.0.30319.34014;
Win32NT 6.3.9600.0)";;"1fe6814a-e4cb-4195-a3cf-837dc7120f68"
```

B.
```
1.0;2014-06-
19T01:33:54.0926521Z;GetBlobProperties;AnonymousSuccess;201;197;54;
anonymous;contosostorage;contosostorage;blob;"https://
contosostorage.blob.core.windows.net/images/00001.jpg";"/
contosostorage/images/00001.jpg";a200be85-1c98-4dd9-918e-
f13d8c0538e0;0;192.100.0.102:4362;2014-02-14;460;23;225;0;23;"DrPO6z1f00SCsomhaf
+J/A==";"DrPO6z1f00SCsomhaf
+J/A==";"&quot;0x8D15975AA456EA4&quot;";Thursday, 19-Jun-14
01:33:53 GMT;;"WA-Storage/4.0.1 (.NET CLR 4.0.30319.34014;
Win32NT 6.3.9600.0)";;"1fe6814a-e4cb-4195-a3cf-837dc7120f68"
```

C.
```
1.0;2014-06-
19T01:33:54.0926521Z;GetBlob;Success;201;197;54;authenticated;
contosostorage;contosostorage;blob;"https://
contosostorage.blob.core.windows.net/images/00001.jpg";"/
contosostorage/images/00001.jpg";a200be85-1c98-4dd9-918e-
f13d8c0538e0;0;192.100.0.102:4362;2014-02-14;460;23;225;0;23;"DrPO6z1f00SCsomhaf
+J/A==";"DrPO6z1f00SCsomhaf
+J/A==";"&quot;0x8D15975AA456EA4&quot;";Thursday, 19-Jun-14
01:33:53 GMT;;"WA-Storage/4.0.1 (.NET CLR 4.0.30319.34014;
Win32NT 6.3.9600.0)";;"1fe6814a-e4cb-4195-a3cf-837dc7120f68"
```

D.
```
1.0;2014-06-
19T01:33:54.0926521Z;GetBlobProperties;Success;201;197;54;authenticated;
contosostorage;contosostorage;blob;"https://
contosostorage.blob.core.windows.net/images/00001.jpg";"/
contosostorage/images/00001.jpg";a200be85-1c98-4dd9-918e-
f13d8c0538e0;0;192.100.0.102:4362;2014-02-14;460;23;225;0;23;"DrPO6z1f00SCsomhaf
+J/A==";"DrPO6z1f00SCsomhaf
+J/A==";"&quot;0x8D15975AA456EA4&quot;";Thursday, 19-Jun-14
01:33:53 GMT;;"WA-Storage/4.0.1 (.NET CLR 4.0.30319.34014;
Win32NT 6.3.9600.0)";;"1fe6814a-e4cb-4195-a3cf-837dc7120f68"
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: A
Explanation:
Check for GetBlob and for AnonymousSuccess.
Example: Get Blob AnonymousSuccess:
1.0;2011-07-
28T18:52:40.9241789Z;GetBlob;AnonymousSuccess;200;18;10;anonymous;;sally;blob;"htt
p://sally.blob.core.windows.net/thumbnails/lake.jpg?timeout=30000";"/sally/thumbnails/lake.jpg
";a84aa705-8a85-48c5-b064-b43bd22979c3;0;123.100.2.10;2009-09-
19;252;0;265;100;0;;;"0x8CE1B6EA95033D5";Thursday, 28-Jul-11 18:52:40 GMT;;;;"7/28/2011
6:52:40 PM ba98eb12-700b-4d53-9230-33a3330571fc"
Incorrect:
Not C: Check for AnonymousSuccess not Access.
Not B, not D: Check for GetBlob not GetBlobProperties
http://blogs.msdn.com/b/windowsazurestorage/archive/2011/08/03/windows-azure-storage-

logging-using-logs-to-track-storage-requests.aspx

QUESTION 88
You manage a software-as-a-service application named SaasApp1 that provides user management features in a multi-directory environment.
You plan to offer SaasApp1 to other organizations that use Azure Active Directory.
You need to ensure that SaasApp1 can access directory objects.
What should you do?

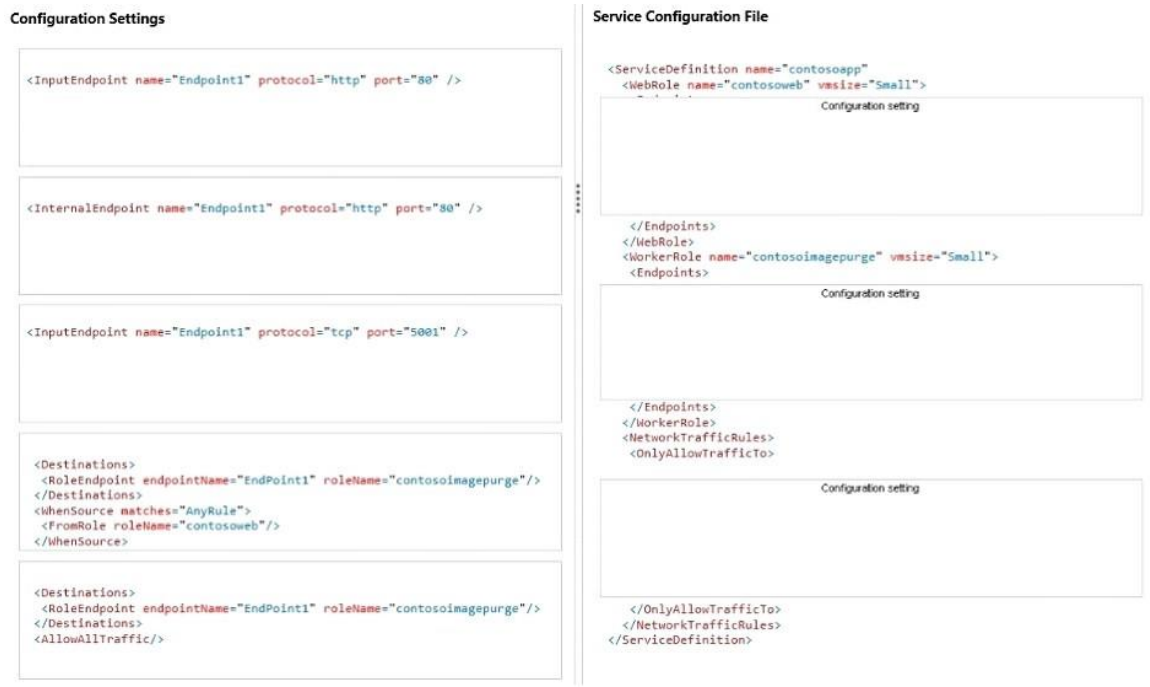
A. Configure the Federation Metadata URL
B. Register SaasApp1 as a native client application.
C. Register SaasApp1 as a web application.
D. Configure the Graph API.

Answer: D
Explanation:
The Azure Active Directory Graph API provides programmatic access to Azure AD through REST API endpoints. Applications can use the Graph API to perform create, read, update, and delete (CRUD) operations on directory data and objects. For example, the Graph API supports the following common operations for a user object:
/ Create a new user in a directory
/ Get a user's detailed properties, such as their groups
/ Update a user's properties, such as their location and phone number, or change their password
/ Check a user's group membership for role-based access
/ Disable a user's account or delete it entirely
http://msdn.microsoft.com/en-us/library/azure/hh974476.aspx

QUESTION 89
Drag and Drop Question
You plan to deploy a cloud service named contosoapp that has a web role named contosoweb and a worker role named contosoimagepurge.
You need to ensure the service meets the following requirements:

```
- Contosoweb can be accessed over the Internet by using http.
- Contosoimagepurge can only be accessed through tcp port 5001 from
contosoweb.
- Contosoimagepurge cannot be accessed directly over the Internet.
```

Which configuration should you use? To answer, drag the appropriate configuration setting to the correct location in the service configuration file. Each configuration setting may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.



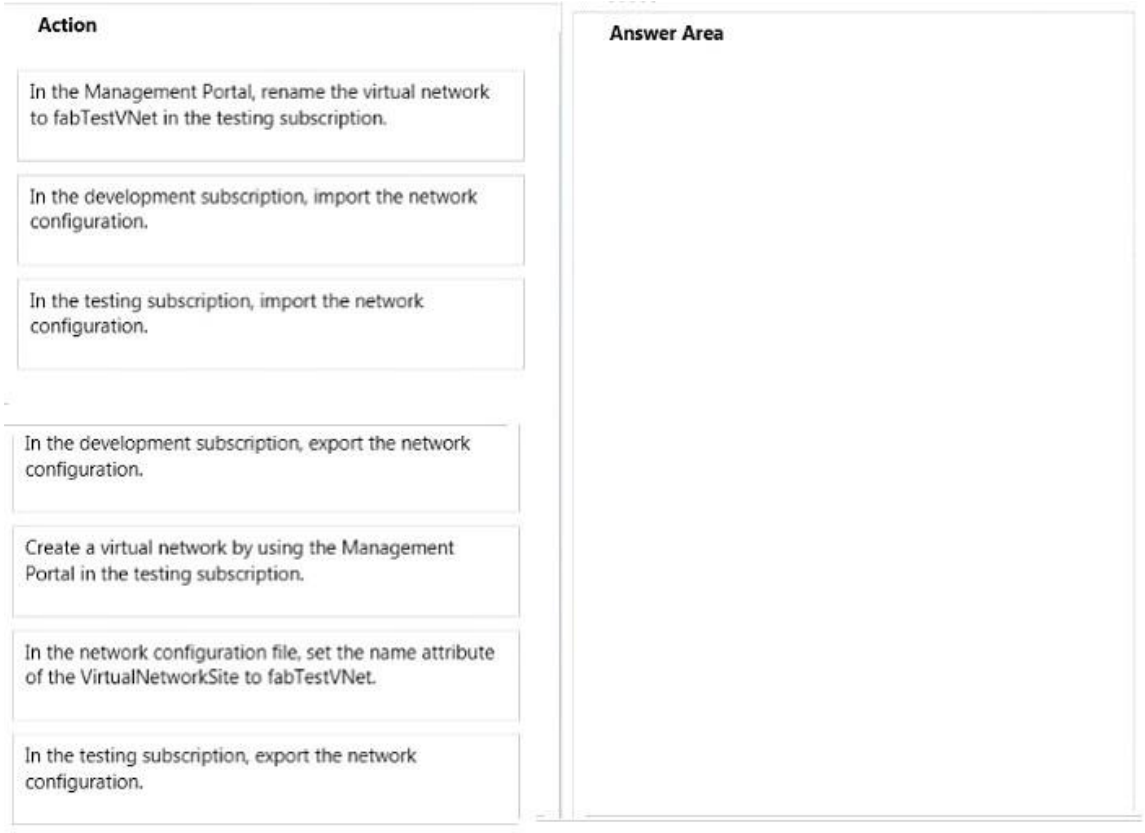
Answer:

QUESTION 90
Your company is launching a public website that allows users to stream videos.
You upload multiple video files to an Azure storage container.
You need to give anonymous users read access to all of the video files in the storage container.
What should you do?

A. Edit each blob's metadata and set the access policy to Public Blob.
B. Edit the container metadata and set the access policy to Public Container.
C. Move the files into a container sub-directory and set the directory access level to Public Blob.
D. Edit the container metadata and set the access policy to Public Blob.

Answer: C
Explanation:
By default, the container is private and can be accessed only by the account owner.
To allow public read access to the blobs in the container, but not the container properties and metadata, use the "Public Blob" option. To allow full public read access for the container and blobs, use the "Public Container" option.

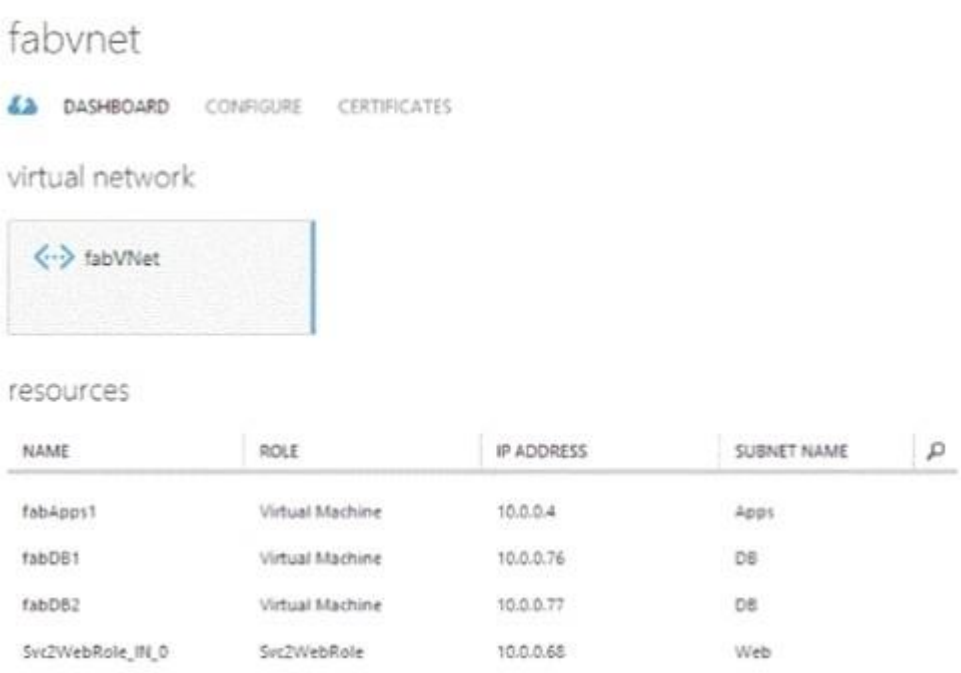
QUESTION 91
Drag and Drop Question
Your development team has created a new solution that is deployed in a virtual network named fabDevVNet.
Your testing team wants to begin testing the solution in a second Azure subscription.
You need to create a virtual network named fabTestVNet that is identical to fabDevVNet.
You want to achieve this goal by using the least amount of administrative effort.
Which three steps should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



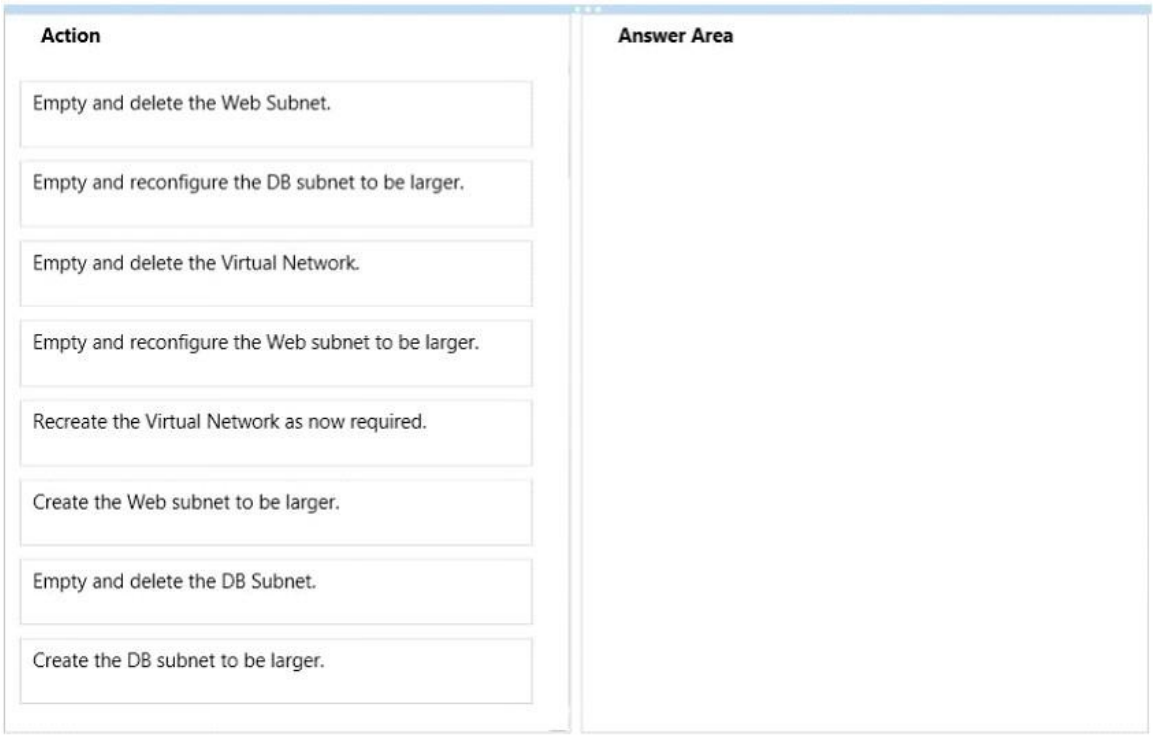
Answer:

Action	Answer Area
In the Management Portal, rename the virtual network to fabTestVNet in the testing subscription.	In the development subscription, export the network configuration.
In the development subscription, import the network configuration.	In the network configuration file, set the name attribute of the VirtualNetworkSite to fabTestVNet.
In the testing subscription, import the network configuration.	In the testing subscription, import the network configuration.
In the development subscription, export the network configuration.	
Create a virtual network by using the Management Portal in the testing subscription.	
In the network configuration file, set the name attribute of the VirtualNetworkSite to fabTestVNet.	
In the testing subscription, export the network configuration.	

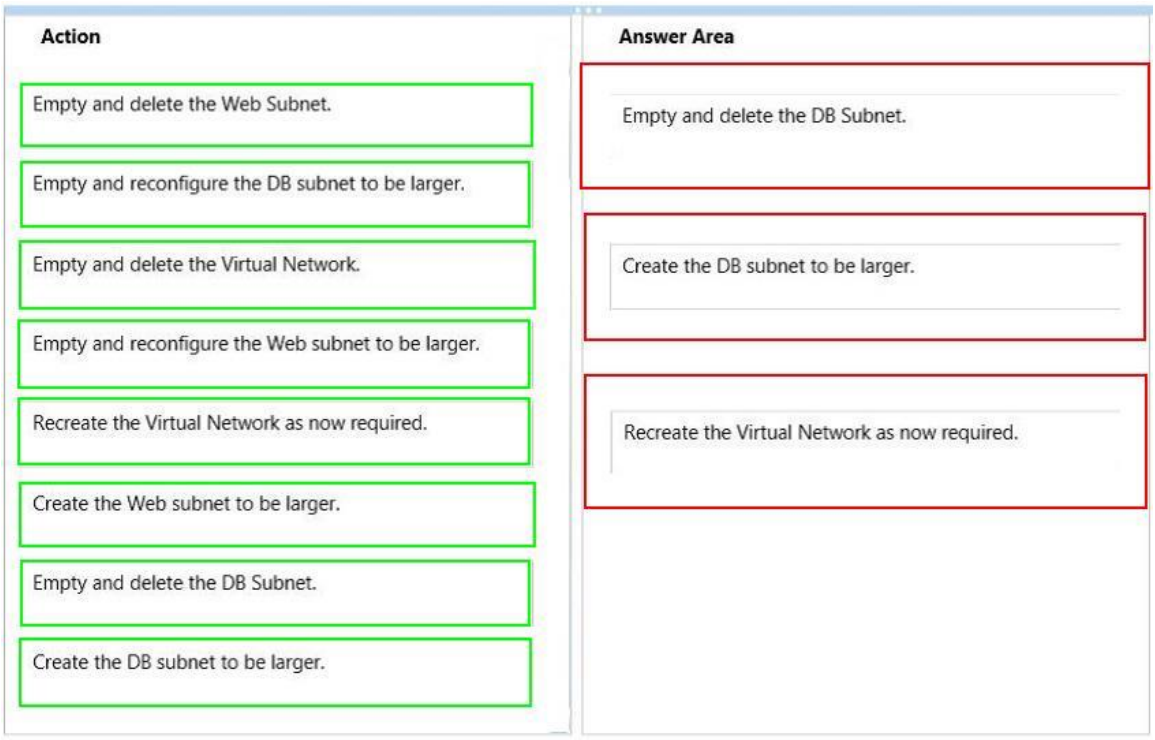
QUESTION 92
Drag and Drop Question
You have a solution deployed into a virtual network in Azure named fabVNet. The fabVNet virtual network has three subnets named Apps, Web, and DB that are configured as shown in the exhibit. (Click the Exhibits button.)



You want to deploy two new VMs to the DB subnet.
You need to modify the virtual network to expand the size of the DB subnet to allow more IP addresses.
Which three steps should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



Answer:



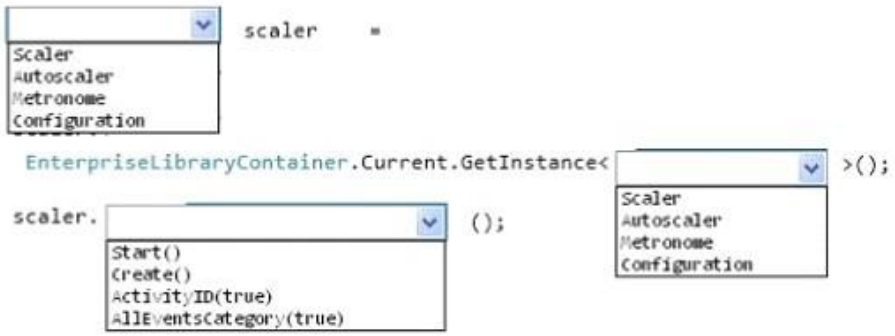
QUESTION 93
Your network environment includes remote employees.
You need to create a secure connection for the remote employees who require access to your Azure virtual network.
What should you do?

A. Deploy Windows Server 2012 RRAS.
B. Configure a point-to-site VPN.
C. Configure an ExpressRoute.
D. Configure a site-to-site VPN.

Answer: B
Explanation:
New Point-To-Site Connectivity
With today's release we've added an awesome new feature that allows you to setup VPN connections between individual computers and a Windows Azure virtual network without the need for a VPN device. We call this feature Point-to-Site Virtual Private Networking. This feature greatly simplifies setting up secure connections between Windows Azure and client machines, whether from your office environment or from remote locations.
It is especially useful for developers who want to connect to a Windows Azure Virtual Network (and to the individual virtual machines within it) from either behind their corporate firewall or a remote location. Because it is point-to-site they do not need their IT staff to perform any activities to enable it, and no VPN hardware needs to be installed or configured. Instead you can just use the built-in Windows VPN client to tunnel to your Virtual Network in Windows Azure.

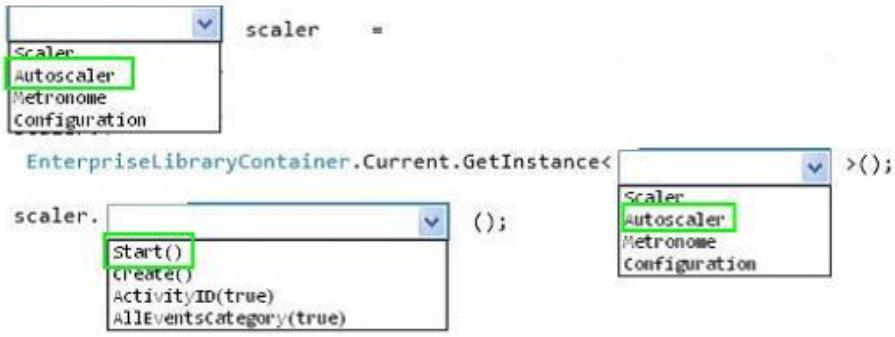
QUESTION 94
Hotspot Question
A company creates an Azure worker role to manage products.
The number of customers who inquire about how many products are in inventory rapidly increases.
You need to ensure that the worker role can scale to accommodate the increased workload.
How should you complete the relevant code? To answer, select the appropriate option or options in the answer area.

Answer Area



Answer:

Answer Area



QUESTION 95
You administer an Azure Storage account with a blob container.
You enable Storage account logging for read, write and delete requests.
You need to reduce the costs associated with storing the logs.
What should you do?

A. Execute Delete Blob requests over https.
B. Create an export job for your container.
C. Set up a retention policy.
D. Execute Delete Blob requests over http.

Answer: C
Explanation:
To ease the management of your logs, we have provided the functionality of retention policy which will automatically cleanup `old' logs without you being charged for the cleanup. It is recommended that you set a retention policy for logs such that your analytics data will be within

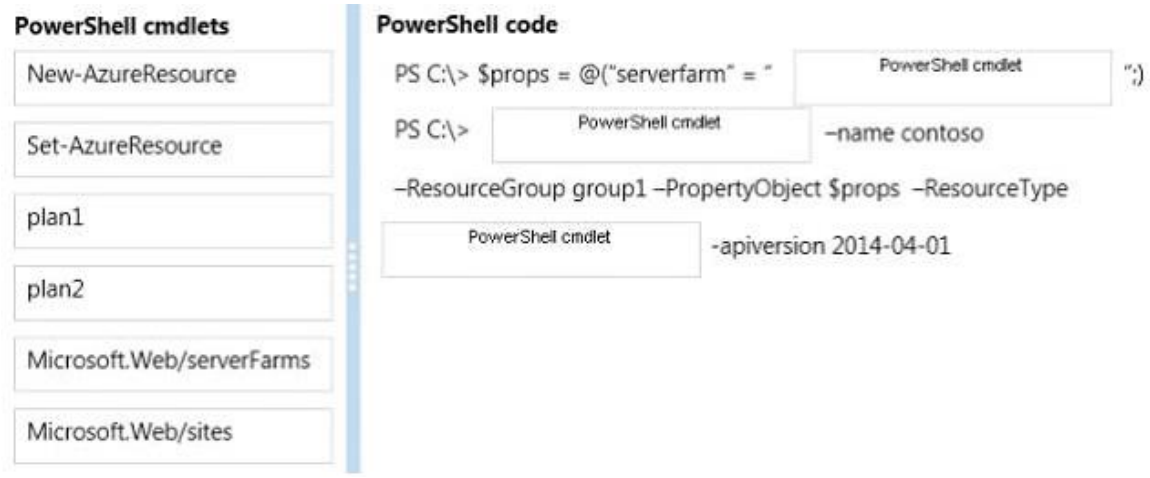
the 20TB limit allowed for analytics data (logs and metrics combined).
http://blogs.msdn.com/b/windowsazurestorage/archive/2011/08/03/windows-azure-storage-logging-using-logs-to-track-storage-requests.aspx

QUESTION 96
You connect to an existing service over the network by using HTTP. The service listens on HTTP port 80. You plan to create a test environment for this existing service by using an Azure virtual machine (VM) that runs Windows Server.
The service must be accessible from the public Internet over HTTP port 8080.
You need to configure the test environment.
Which two actions should you take? Each correct answer presents part of the solution.

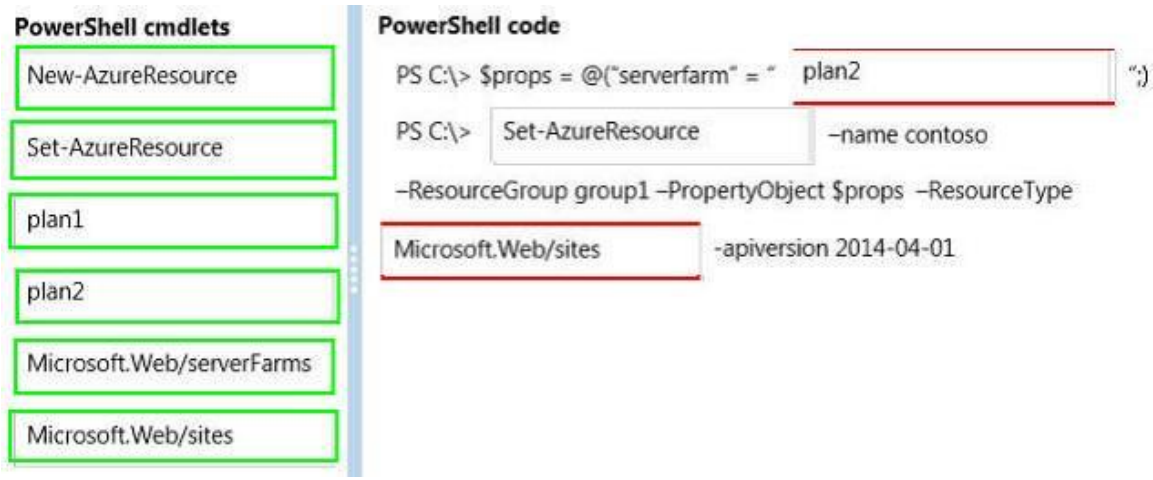
A. Configure an endpoint to route traffic from port 8080 to port 80.
B. Configure an endpoint to route traffic from port 80 to port 8080.
C. Ensure that the public IP address is configured as a static IP address.
D. Configure the Windows Server firewall to allow incoming and outgoing traffic on port 8080.
E. Configure the Windows Server firewall to allow incoming and outgoing traffic on port 80.

Answer: AE

QUESTION 97
Drag and Drop Question
Your company manages several Azure Web Sites that are running in an existing web- hosting plan named plan1.
You need to move one of the websites, named contoso, to a new web-hosting plan named plan2.
Which Azure PowerShell cmdlet should you use with each PowerShell command line? To answer, drag the appropriate Azure PowerShell cmdlet to the correct location in the PowerShell code. Each PowerShell cmdlet may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

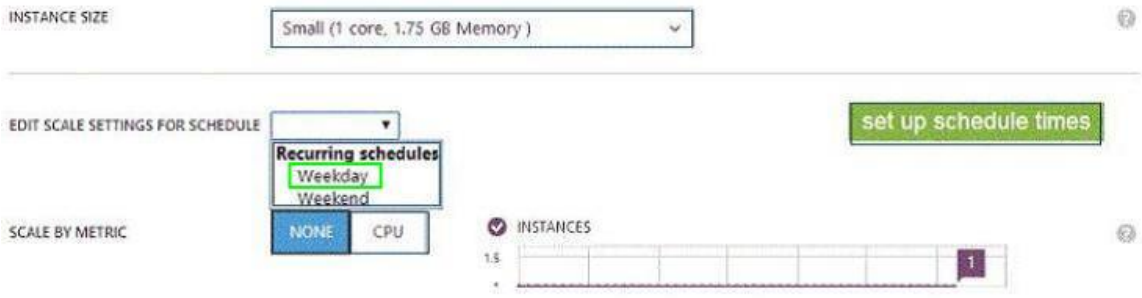


Answer:



QUESTION 98
Hotspot Question
You manage an Azure Web Site for a consumer-product company.
The website runs in Standard mode on a single medium instance.
You expect increased traffic to the website due to an upcoming sale during a holiday weekend.
You need to ensure that the website performs optimally when user activity is at its highest.
Which option should you select? To answer, select the appropriate option in the answer area.

Answer:



QUESTION 99
Your company network includes two branch offices. Users at the company access internal virtual machines (VMs).
You want to ensure secure communications between the branch offices and the internal VMs and network.

You need to create a site-to-site VPN connection.
What are two possible ways to achieve this goal? Each correct answer presents a complete solution.

A. a private IPv4 IP address and a compatible VPN device
B. a private IPv4 IP address and a RRAS running on Windows Server 2012
C. a public-facing IPv4 IP address and a compatible VPN device
D. a public-facing IPv4 IP address and a RRAS running on Windows Server 2012

Answer: CD
Explanation:
C (not A): VPN Device IP Address - This is public facing IPv4 address of your on-premises VPN device that you'll use to connect to Azure. The VPN device cannot be located behind a NAT.
D (Not B): At least one or preferably two publicly visible IP addresses: One of the IP addresses is used on the Windows Server 2012 machine that acts as the VPN device by using RRAS.
The other optional IP address is to be used as the Default gateway for out- bound traffic from the on-premises network. If the second IP address is not available, it is possible to configure network address translation (NAT) on the RRAS machine itself, to be discussed in the following sections.
It is important to note that the IP addresses must be public. They cannot be behind NAT and/or a firewall.

QUESTION 100
You administer a DirSync server configured with Azure Active Directory (Azure AD).
You need to provision a user in Azure AD without waiting for the default DirSync synchronization interval.
What are two possible ways to achieve this goal? Each correct answer presents a complete solution.

A. Restart the DirSync server.
B. Run the Start-OnlineCoexistenceSync PowerShell cmdlet.
C. Run the Enable-SyncShare PowerShell cmdlet.
D. Run the Azure AD Sync tool Configuration Wizard.
E. Replicate the Directory in Active Directory Sites and Services.

Answer: BD
Explanation:
If you don't want to wait for the recurring synchronizations that occur every three hours, you can force directory synchronization at any time.
B: Force directory synchronization using Windows PowerShell
You can use the directory synchronization Windows PowerShell cmdlet to force synchronization. The cmdlet is installed when you install the Directory Sync tool. On the computer that is running the Directory Sync tool, start PowerShell, type Import- Module DirSync, and then press ENTER. Type Start-OnlineCoexistenceSync, and then press ENTER.
D: Azure Active Directory Sync Services (AAD Sync) In September 2014 the Microsoft Azure AD Sync tool was released. This changed how manual sync requests are issued.
To perform a manual update we now use the DirectorySyncClientCmd.exe tool. The Delta and Initial parameters are added to the command to specify the relevant task.
This tool is located in:
C:\Program Files\Microsoft Azure AD Sync\Bin
You can use the directory synchronization Windows PowerShell cmdlet to force synchronization. The cmdlet is installed when you install the Directory Sync tool. On the computer that is running the Directory Sync tool, start PowerShell, type Import- Module DirSync, and then press ENTER. Type Start-OnlineCoexistenceSync, and then press ENTER.

QUESTION 101
An application sends Azure push notifications to a client application that runs on Windows Phone, iOS, and Android devices.
Users cannot use the application on some devices.
The authentication mechanisms that the application uses are the source of the problem.
You need to monitor the number of notifications that failed because of authentication errors.
Which three metrics should you monitor? Each correct answer presents part of the solution.

A. Microsoft Push Notification Service (MPNS) authentication errors
B. External notification system errors
C. Apple Push Notification Service (APNS) authentication errors
D. Channel errors
E. Windows Push Notification Services (WNS) authentication errors
F. Google Cloud Messaging (GCM) authentication errors

Answer: ACF

QUESTION 102
You administer an Azure Active Directory (Azure AD) tenant that has a SharePoint web application named TeamSite1. TeamSite1 accesses your Azure AD tenant for user information.
The application access key for TeamSite1 has been compromised.
You need to ensure that users can continue to use TeamSite1 and that the compromised key does not allow access to the data in your Azure AD tenant.
Which two actions should you perform? Each correct answer presents part of the solution.

A. Remove the compromised key from the application definition for TeamSite1.
B. Delete the application definition for TeamSite1.
C. Generate a new application key for TeamSite1.
D. Generate a new application definition for TeamSite1.
E. Update the existing application key.

Answer: AC
Explanation:
One of the security aspects of Windows Azure storage is that all access is protected by access keys.
It is possible to change the access keys (e.g. if the keys become compromised), and if changed, we'd need to update the application to have the new key.

QUESTION 103
You manage a cloud service on two instances.
The service name is Service1 and the role name is ServiceRole1.
Service1 has performance issues during heavy traffic periods.
You need to increase the existing deployment of Service1 to three instances.
Which Power Shell cmdlet should you use?

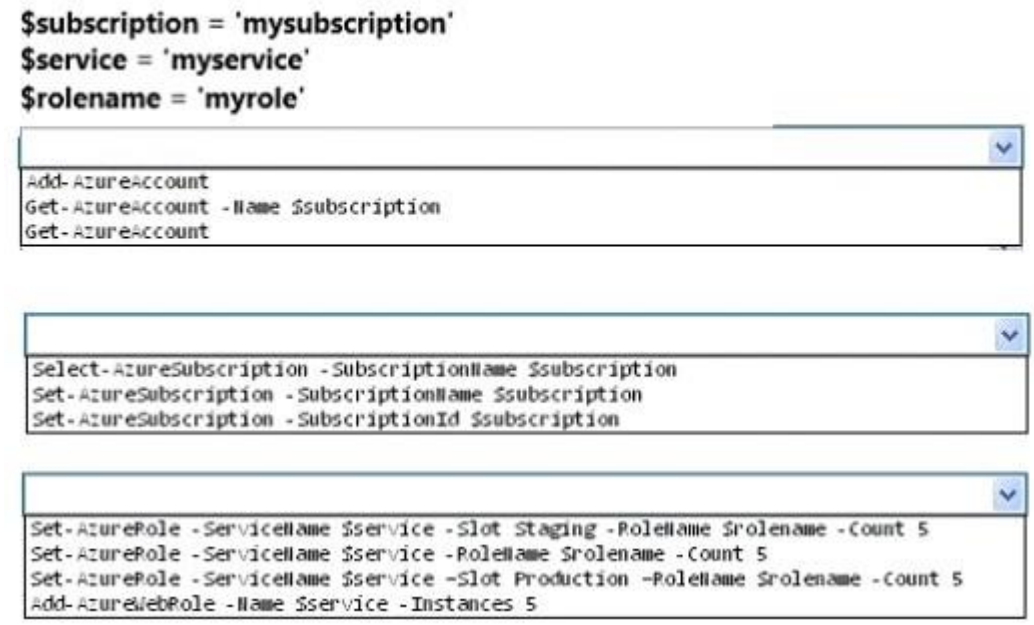
A. PS C:\>Set-AzureService -ServiceName "Service1" -Label "ServiceRole1' -Description "Instance count=3"
B. PS C:\>Set-AzureRole -ServiceName "Service1" -Slot "Production" -RoleName "ServiceRole1" -Count 3
C. PS C:\>Add-AzureWebRole -Name 'ServiceRole1" -Instances 3
D. PS C:\> $instancecount = New-Object Hashtable$settings['INSTANCECOUNT=3] PS C:\> Set-

AzureWebsite -AppSettings $instancecount ServiceRole1

Answer: B

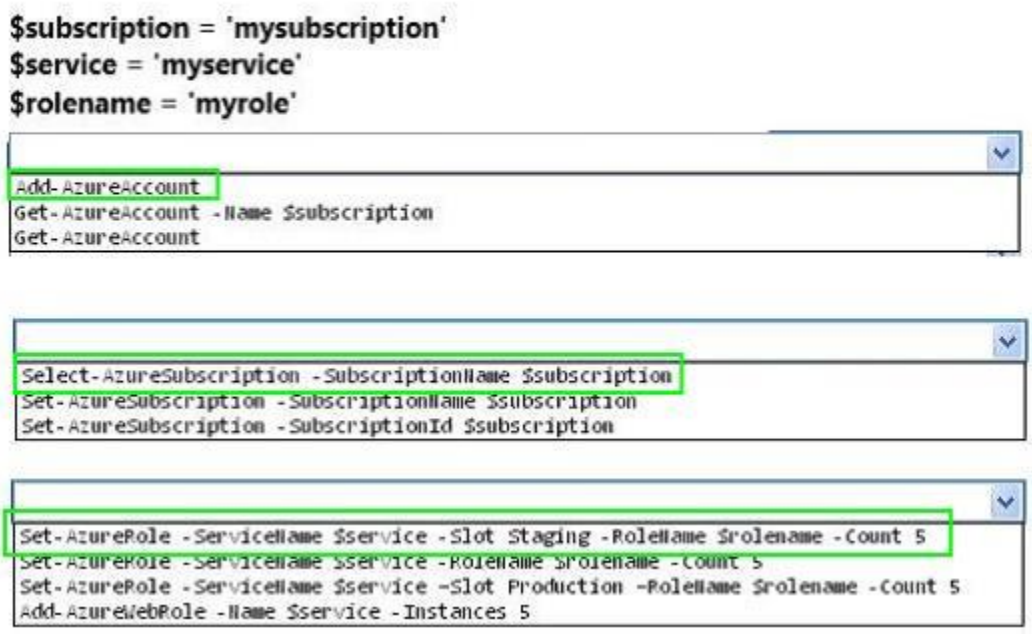
QUESTION 104
Hotspot Question
You deploy a new version of a cloud-service application to a staging slot. The application consists of one web role. You prepare to swap the new version of the application into the production slot.
Your Azure account has access to multiple Azure subscriptions. You load the Azure PowerShell cmdlets into the Windows PowerShell command shell. The command shell is NOT configured for certificate-based authentication.
You must use the Windows PowerShell command window to configure the application.
You need to create five instances of the web role.
How should you configure the relevant Windows PowerShell script? To answer, select the appropriate option or options in the answer area.

Answer Area



Answer:

Answer Area



QUESTION 105
Your company has a subscription to Azure.
You configure your contoso.com domain to use a private Certificate Authority.
You deploy a web site named MyApp by using the Shared (Preview) web hosting plan.
You need to ensure that clients are able to access the MyApp website by using https.
What should you do?

A. Back up the Site and import into a new website.
B. Use the internal Certificate Authority and ensure that clients download the certificate chain.
C. Add custom domain SSL support to your current web hosting plan.
D. Change the web hosting plan to Standard.

Answer: D
Explanation:
Enabling HTTPS for a custom domain is only available for the Standard web hosting plan mode of Azure websites.

QUESTION 106
You manage a cloud service that hosts a customer-facing application.
The application allows users to upload images and create collages.
The cloud service is running in two medium instances and utilizes Azure Queue storage for image processing.
The storage account is configured to be locally redundant.
The sales department plans to send a newsletter to potential clients.
As a result, you expect a significant increase in global traffic.
You need to recommend a solution that meets the following requirements:

- Configure the cloud service to ensure the application is responsive

to the traffic increase.
- Minimize hosting and administration costs.

What are two possible ways to achieve this goal? Each correct answer presents a complete solution.

A. Configure the cloud service to run in two Large instances.
B. Configure the cloud service to auto-scale to three instances when processor utilization is above 80%.
C. Configure the storage account to be geo-redundant
D. Deploy a new cloud service in a separate data center.
Use Azure Traffic Manager to load balance traffic between the cloud services.
E. Configure the cloud service to auto-scale when the queue exceeds 1000 entries per machine.

Answer: BE
Explanation:
* An autoscaling solution reduces the amount of manual work involved in dynamically scaling an application. It can do this in two different ways: either preemptively by setting constraints on the number of role instances based on a timetable, or reactively by adjusting the number of role instances in response to some counter(s) or measurement(s) that you can collect from your application or from the Azure environment.

QUESTION 107
You manage an application running on Azure Web Sites Standard tier.
The application uses a substantial amount of large image files and is used by people around the world.
Users from Europe report that the load time of the site is slow.
You need to implement a solution by using Azure services.
What should you do?

A. Configure Azure blob storage with a custom domain.
B. Configure Azure CDN to cache all responses from the application web endpoint.
C. Configure Azure Web Site auto-scaling to increase instances at high load.
D. Configure Azure CDN to cache site images and content stored in Azure blob storage.

Answer: A
Explanation:
You can configure a custom domain for accessing blob data in your Azure storage account. The default endpoint for the Blob service is https://<mystorageaccount>.blob.core.windows.net. If you map a custom domain and subdomain such as www.contoso.com to the blob endpoint for your storage account, then your users can also access blob data in your storage account using that domain.
http://azure.microsoft.com/en-us/documentation/articles/storage-custom-domain- name/

QUESTION 108
Hotspot Question
You manage a public-facing web application which allows authenticated users to upload and download large files. On the initial public page there is a promotional video.
You plan to give users access to the site content and promotional video.
In the table below, identify the access method that should be used for the anonymous and authenticated parts of the application. Make only one selection in each column.

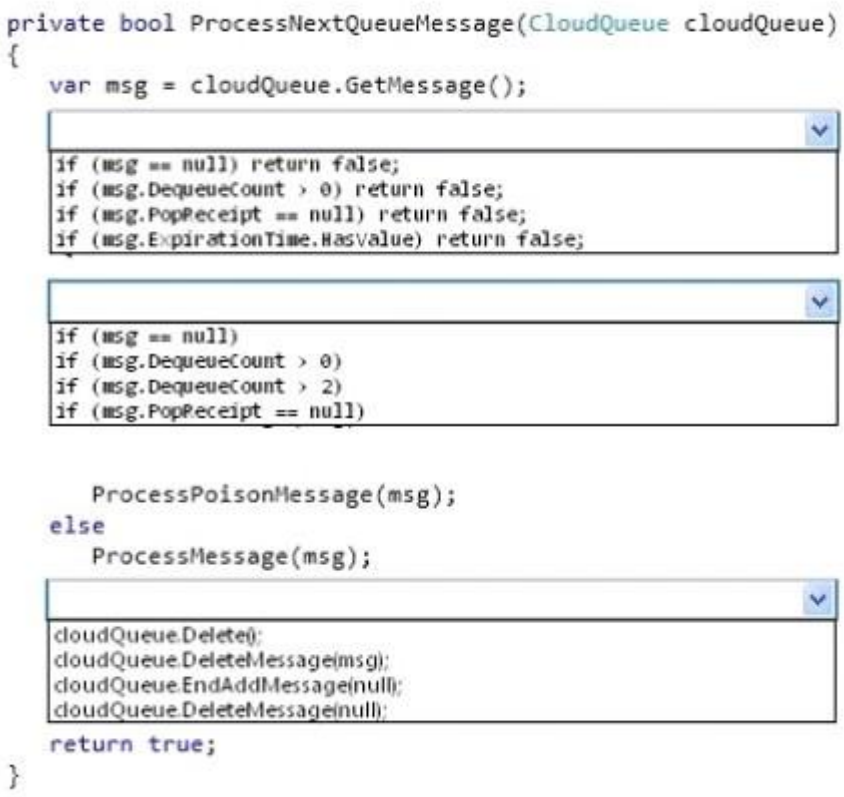
Access Method	Anonymous	Authenticated
Create an Access Policy per user and provide Read and Write access to the blob files by using Shared Access Signatures.	○	○
Create Ad-Hoc Shared Access Signatures to provide read-only access to the blob files.	○	○
Create Ad-Hoc Shared Access Signatures to provide Read and Write access to the blob files.	○	○
Make the blob container public.	○	○

Answer:

Access Method	Anonymous	Authenticated
Create an Access Policy per user and provide Read and Write access to the blob files by using Shared Access Signatures.	○	○
Create Ad-Hoc Shared Access Signatures to provide read-only access to the blob files.	○	○
Create Ad-Hoc Shared Access Signatures to provide Read and Write access to the blob files.	○	○
Make the blob container public.	○	○

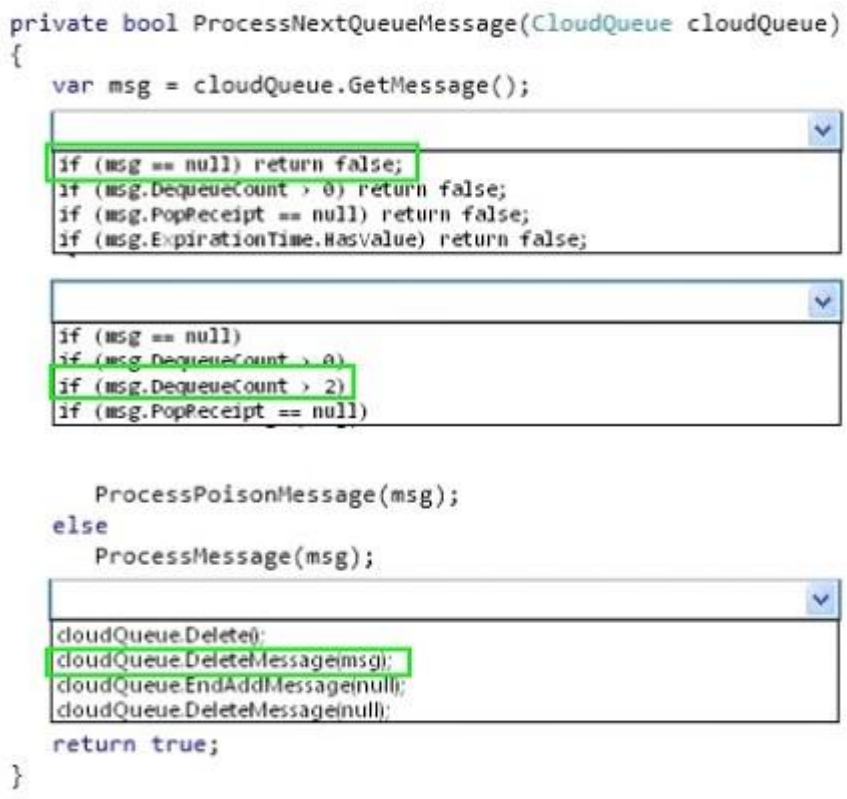
QUESTION 109
Hotspot Question
You are developing an Azure cloud service for a company. The cloud service monitors a queue for incoming messages and then processes invoices based on the contents of these messages. Some messages are formed incorrectly and cause exceptions. There is no time limit for how long the service takes to process an individual message.
All messages must be processed at least once by using the ProcessMessage method. Messages must not be processed more than twice by using the ProcessMessage method. Messages that fail normal processing must be processed by using the ProcessPoisonMessage method.
You need to configure message processing.
How should you complete the relevant code? To answer, select the appropriate option or options in the answer area.

Answer Area



Answer:

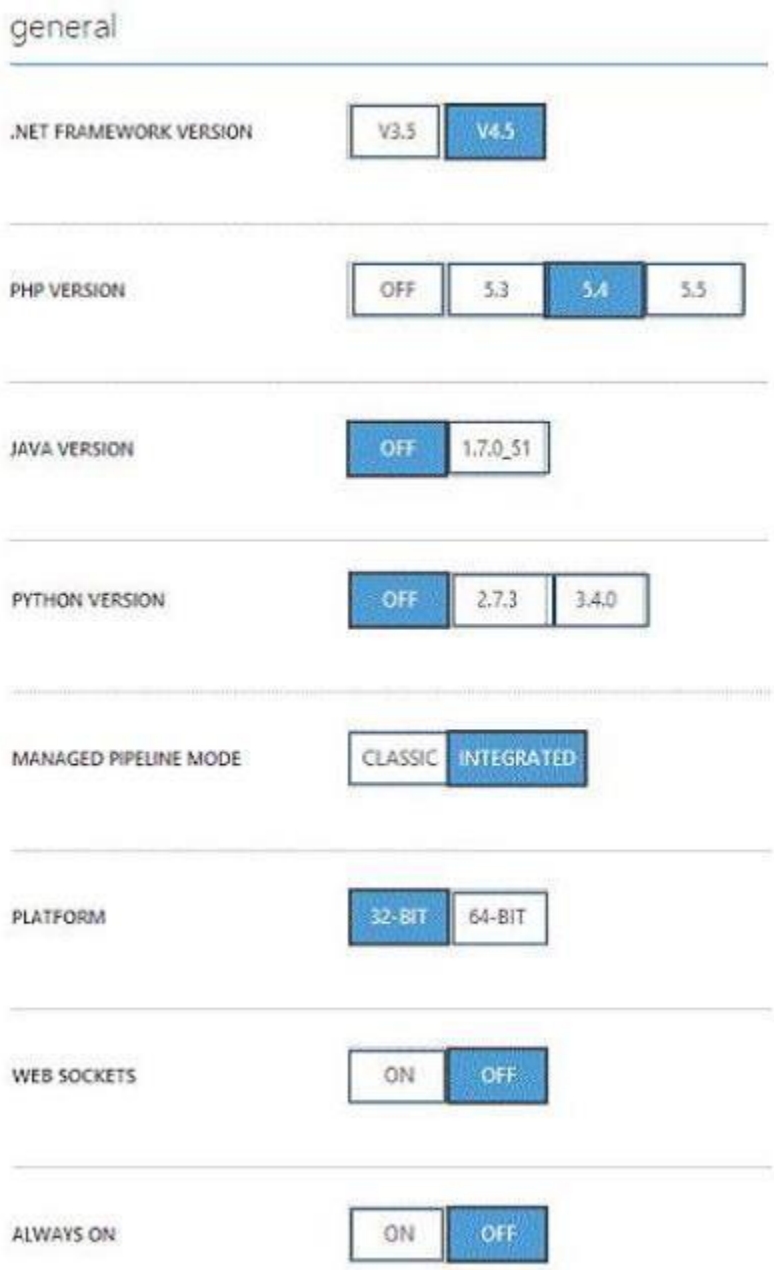
Answer Area



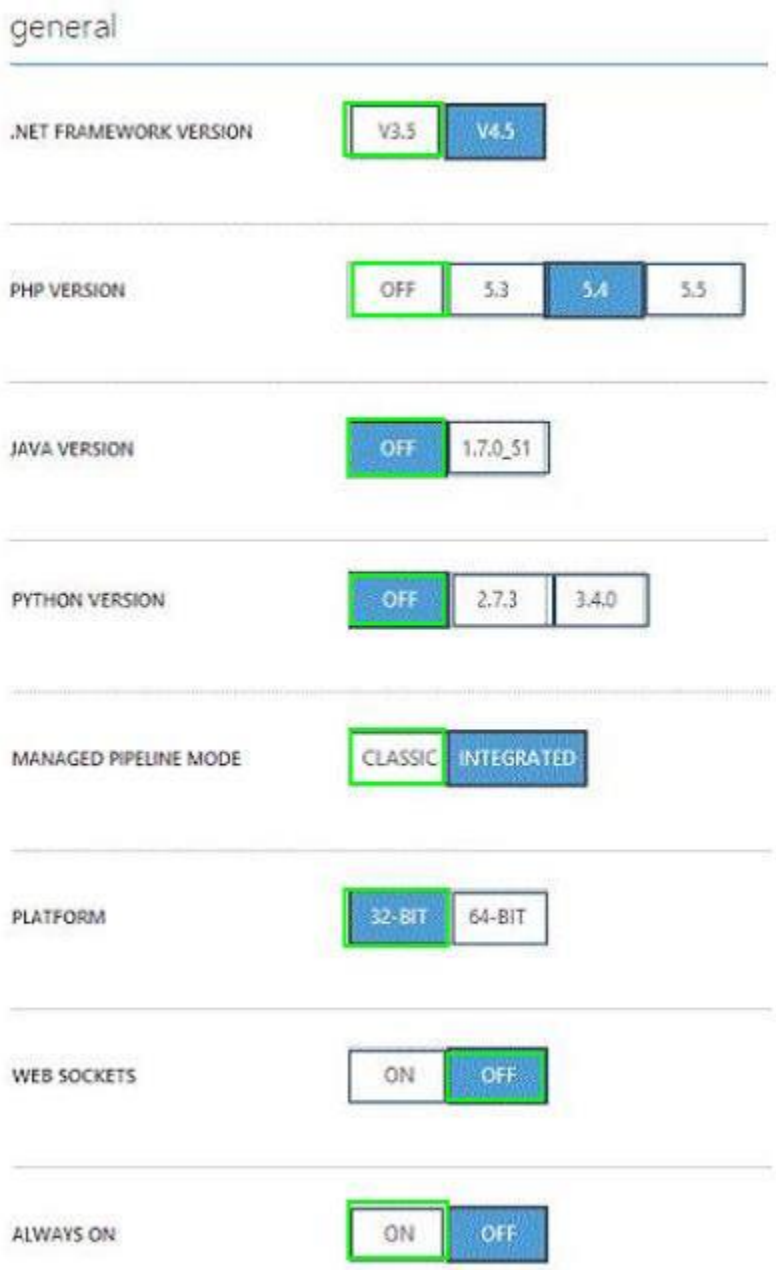
QUESTION 110
Hotspot Question
You manage an Internet Information Services (IIS) 6 website named contososite1. Contososite1 runs a legacy ASP.NET 1.1 application named LegacyApp1. LegacyApp1 does not contain any integration with any other systems or programming languages.
You deploy contososite1 to Azure Web Sites.
You need to configure Azure Web Sites.
You have the following requirements:

- LegacyApp1 runs correctly.
- The application pool does not recycle.

Which settings should you configure to meet the requirements? To answer, select the appropriate settings in the answer area.


general
.NET FRAMEWORK VERSION
V3.5
V4.5
PHP VERSION
OFF
5.3
5.4
5.5
JAVA VERSION
OFF
1.7.0_51
PYTHON VERSION
OFF
2.7.3
3.4.0
MANAGED PIPELINE MODE
CLASSIC
INTEGRATED
PLATFORM
32-BIT
64-BIT
WEB SOCKETS
ON
OFF
ALWAYS ON
ON
OFF

Answer:



QUESTION 111
You plan to deploy an application as a cloud service.
The application uses a virtual network to extend your on-premises network into Azure.
You need to configure a site-to-site VPN for cross-premises network connections.
Which two objects should you configure? Each correct answer presents part of the solution.

A. Dynamic routing gateway
B. VPN gateway
C. External-facing IPv6 address
D. External-facing IPv4 address

Answer: BD

QUESTION 112
Hotspot Question
You have a WebJob object that runs as part of an Azure website.
The WebJob object uses features from the Azure SDK for .NET.
You use a well-formed but invalid storage key to create the storage account that you pass into the UploadDataToAzureStorage method.
The WebJob object contains the following code segment. Line numbers are included for reference only.

```
01 void UploadDataToAzureStorage(CloudStorageAccount storageAccount,
    string storageContainerName, string blobpath, string localpath)
02 {
03    var blobClient = storageAccount.CreateCloudBlobClient();
04    var container = blobClient.GetContainerReference(storageContainerName);
05    CloudBlockBlob blockBlob = container.GetBlockBlobReference(blobpath);
06    blockBlob.UploadFromFile(localpath, FileMode.Open);
07 }
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

Answer Area

	Yes	No
If the storage container does not already exist when the code runs, a file can still be uploaded successfully.	○	○
If a transient fault occurs when the code segment on line 06 runs, the Azure SDK will attempt to upload the file again.	○	○
The code segment at line 06 will fail when the code runs.	○	○

Answer:

Answer Area

	Yes	No
If the storage container does not already exist when the code runs, a file can still be uploaded successfully.	○	○
If a transient fault occurs when the code segment on line 06 runs, the Azure SDK will attempt to upload the file again.	○	○
The code segment at line 06 will fail when the code runs.	○	○

QUESTION 113
Drag and Drop Question
You administer an Azure Virtual Machine (VM) named CON-CL1.
CON-CL1 is in a cloud service named ContosoService1.

You want to create a new VM named MyApp that will have a fixed IP address and be hosted by an Azure Datacenter in the US West region.
You need to assign a fixed IP address to the MyApp VM.
Which Azure Power Shell cmdlets and values should you use? To answer, drag the appropriate cmdlet or value to the correct location in the PowerShell command. Each cmdlet or value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content

Answer:

QUESTION 114
You manage an Azure subscription with virtual machines (VMs) that are running in Standard mode.
You need to reduce the storage costs associated with the VMs.
What should you do?

A. Locate and remove orphaned disks.
B. Add the VMs to an affinity group.
C. Change VMs to the Basic tier.
D. Delete the VHD container.

Answer: C

Explanation:
Standard offers 50 GB of storage space, while Basic only gives 10 GB but it will save costs.
http://azure.microsoft.com/en-us/pricing/details/websites/

QUESTION 115
You manage a web application published to Azure Cloud Services.
Your service level agreement (SLA) requires that you are notified in the event of poor performance from customer locations in the US, Asia, and Europe.
You need to configure the Azure Management Portal to notify you when the SLA performance targets are not met.
What should you do?

A. Create an alert rule to monitor web endpoints.
B. Create a Notification Hub alert with response time metrics.
C. Add an endpoint monitor and alert rule to the Notification Hub.
D. Configure the performance counter on the cloud service.

Answer: A
Explanation:
* An alert rule enables you to monitor an available metric within a supported Azure service. When the value of a specified metric violates the threshold assigned for a rule, the alert rule becomes active and registers an alert. When you create an alert rule, you can select options to send an email notification to the service administrator and co- administrators, or another administrator, when the rule becomes active, and when an alert condition is resolved.
* You can configure cloud service alert rules on:
Web endpoint status metrics
Monitoring metrics from the cloud service host operating system Performance counters collected from the cloud service guest virtual machine
http://msdn.microsoft.com/en-us/library/azure/dn306639.aspx

QUESTION 116
Your company has recently signed up for Azure.
You plan to register a Data Protection Manager (DPM) server with the Azure Backup service.
You need to recommend a method for registering the DPM server with the Azure Backup vault.
What are two possible ways to achieve this goal? Each correct answer presents a complete solution.

A. Import a self-signed certificate created using the makecert tool.
B. Import a self-signed certificate created using the createcert tool.
C. Import an X.509 v3 certificate with valid clientauthentication EKU.
D. Import an X.509 v3 certificate with valid serverauthentication EKU.

Answer: AC
Explanation:
A: You can create a self-signed certificate using the makecert tool, or use any valid SSL certificate issued by a Certification Authority (CA) trusted by Microsoft, whose root certificates are distributed via the Microsoft Root Certificate Program.
C: The certificate must have a valid ClientAuthentication EKU.
http://technet.microsoft.com/en-us/library/dn296608.aspx

QUESTION 117
Your company plans to migrate from On-Premises Exchange to Exchange Online in Office 365.

You plan to integrate your existing Active Directory Domain Services (AD DS) infrastructure with Azure AD.
You need to ensure that users can log in by using their existing AD DS accounts and passwords.
You need to achieve this goal by using minimal additional systems.
Which two actions should you perform? Each answer presents part of the solution.

A. Configure Password Sync.
B. Set up a DirSync Server.
C. Set up an Active Directory Federation Services Server.
D. Set up an Active Directory Federation Services Proxy Server.

Answer: BC

QUESTION 118
Hotspot Question
You administer an Azure Active Directory (Azure AD) tenant.
You add a custom application to the tenant.
The application must be able to:

```
- Read data from the tenant directly.
- Write data to the tenant on behalf of a user.
```

In the table below, identify the permission that must be granted to the application. Make only one selection in each column.

Permission	Application Permission	Delegated Permission
Read and write directory data.	○	○
Read directory data.	○	○
Access your organization's directory.	○	○
Enable sign-on and read users' profiles.	○	○

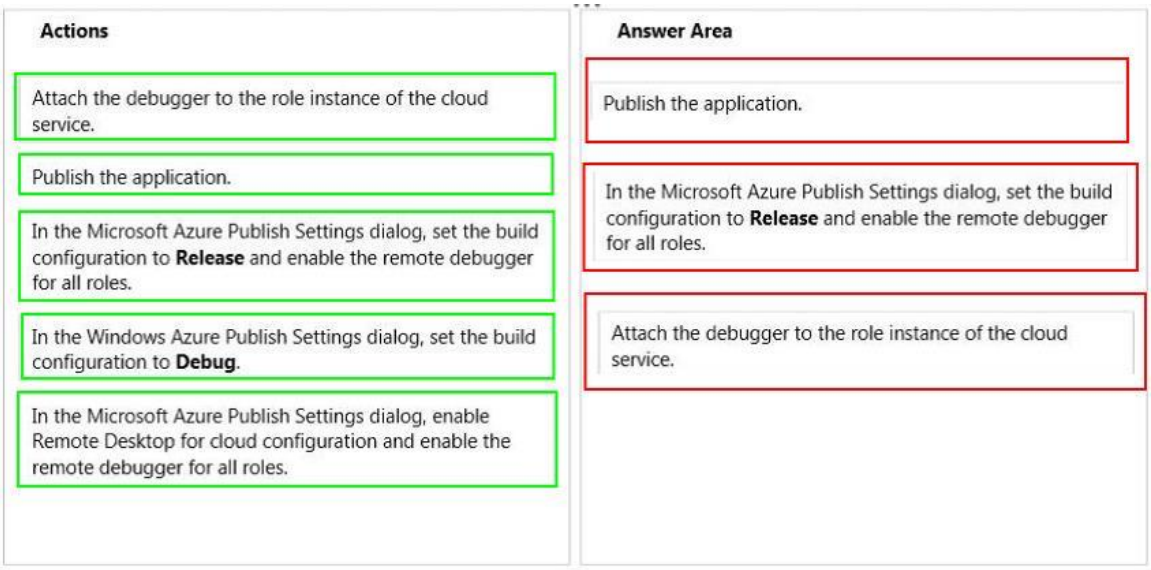
Answer:

Permission	Application Permission	Delegated Permission
Read and write directory data.	○	○
Read directory data.	○	○
Access your organization's directory.	○	○
Enable sign-on and read users' profiles.	○	○

QUESTION 119
Drag and Drop Question
You deploy an application as a cloud service to Azure.
The application contains a web role to convert temperatures between Celsius and Fahrenheit.
The application does not correctly convert temperatures.
You must use Microsoft Visual Studio to determine why the application does not correctly convert temperatures.
You need to debug the source code in Azure.
Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer Area
Attach the debugger to the role instance of the cloud service.	
Publish the application.	
In the Microsoft Azure Publish Settings dialog, set the build configuration to **Release** and enable the remote debugger for all roles.	
In the Windows Azure Publish Settings dialog, set the build configuration to **Debug**.	
In the Microsoft Azure Publish Settings dialog, enable Remote Desktop for cloud configuration and enable the remote debugger for all roles.	

Answer:



QUESTION 120
You develop a set of Power Shell scripts that will run when you deploy new virtual machines (VMs).
You need to ensure that the scripts are executed on new VMs.
You want to achieve this goal by using the least amount of administrative effort.
What should you do?

A. Create a new GPO to execute the scripts as a logon script.
B. Create a SetupComplete.cmd batch file to call the scripts after the VM starts.
C. Create a new virtual hard disk (VHD) that contains the scripts.
D. Load the scripts to a common file share accessible by the VMs.
E. Set the VMs to execute a custom script extension.

Answer: E
Explanation:
After you deploy a Virtual Machine you typically need to make some changes before it's ready to use. This is something you can do manually or you could use Remote PowerShell to automate the configuration of your VM after deployment for example.
But now there's a third alternative available allowing you customize your VM: the CustomScript extension.
This CustomScript extension is executed by the VM Agent and it's very straightforward: you specify which files it needs to download from your storage account and which file it needs to execute. You can even specify arguments that need to be passed to the script. The only requirement is that you execute a .ps1 file.

QUESTION 121
You administer an Azure Web Site named contosoweb that is used to sell various products.
Contosoweb experiences heavy traffic during weekends.
You need to analyze the response time of the product catalog page during peak times, from different locations.
What should you do?

A. Configure endpoint monitoring.
B. Add the Requests metric.
C. Turn on Failed Request Tracing.
D. Turn on Detailed Error Messages.

Answer: A
Explanation:
Endpoint monitoring configures web tests from geo-distributed locations that test response time and uptime of web URLs. The test performs an HTTP get operation on the web URL to determine the response time and uptime from each location. Each configured location runs a test every five minutes. After you configure endpoint monitoring, you can drill down into the individual endpoints to view details response time and uptime status over the monitoring interval from each of the test location

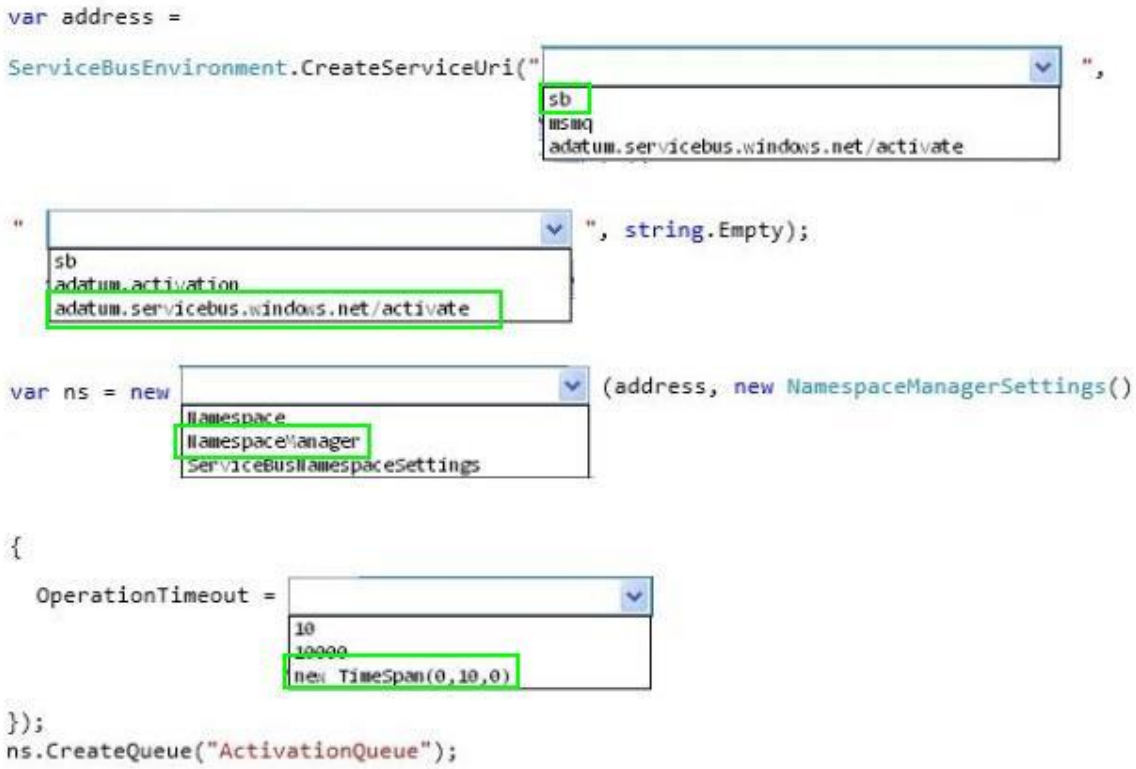
QUESTION 122
Hotspot Question
You are developing a messaging solution for a financial services company named Adatum.
The solution must integrate an application named Enrollment and an application named Activation.
The Enrollment application is used to enroll new customers.
The Activation application is used to activate accounts for new customers.
You need to ensure that each message that the Enrollment application sends is stored in a queue for ten minutes before the Activation application uses the message.
How should you complete the relevant code? To answer, select the appropriate option or options in the answer area.

Answer Area

```
var address =
ServiceBusEnvironment.CreateServiceUri("[ ▼ ]", "
    sb
    msmq
    adatum.servicebus.windows.net/activate
" [ ▼ ] ", string.Empty);
    sb
    adatum.activation
    adatum.servicebus.windows.net/activate
var ns = new [ ▼ ] (address, new NamespaceManagerSettings()
    Namespace
    NamespaceManager
    ServiceBusNamespaceSettings
{
  OperationTimeout = [ ▼ ]
    10
    10000
    new TimeSpan(0,10,0)
});
ns.CreateQueue("ActivationQueue");
```

Answer:

Answer Area



QUESTION 123
Drag and Drop Question
You manage two solutions in separate Azure subscriptions.
You need to ensure that the two solutions can communicate on a private network.
Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Action	Answer Area
Check ExpressRoute on the virtual network configuration page.	
Update the connection certificate.	
Create the static routing gateways.	
Connect the VPN gateways.	
Add local networks to the VNets.	
Run Set-AzureVNetIP PowerShell cmdlet.	
Create the dynamic routing gateways.	
Edit the ACL on the virtual network gateway to accept connections.	

Answer:

Action	Answer Area
Check ExpressRoute on the virtual network configuration page.	Add local networks to the VNets.
Update the connection certificate.	Create the dynamic routing gateways.
Create the static routing gateways.	Connect the VPN gateways.
Connect the VPN gateways.	
Add local networks to the VNets.	
Run Set-AzureVNetIP PowerShell cmdlet.	
Create the dynamic routing gateways.	
Edit the ACL on the virtual network gateway to accept connections.	

QUESTION 124
Hotspot Question
You use the Windows PowerShell Desired State Configuration (DSC) feature to configure your company's servers. Line numbers are included for reference only.

```
01 $ConfigurationData = @{
02   AllNodes = @(
03     @{NodeName = 'Server1';Role='Web'},
04     @{NodeName = 'Server2';Role='FileShare'}
05     @{NodeName = 'Server3';Role=@('FileShare','Web')}
06   )
07 }
08 configuration RoleConfiguration
09 {
10    param ($Roles)
11    switch ($Roles)
12    {
13      'FileShare'
14      {
15         WindowsFeature FileSharing
16         {
17            Name = 'FS-FileServer'
18         }
19      }
20      'Web'
21      {
22          WindowsFeature Web
23          {
24             Name = 'Web-Server'
25             Ensure = 'Absent'
26          }
27      }
28    }
29 }
30 configuration MyFirstServerConfig
31 {
32    node $allnodes.NodeName
33    {
34       WindowsFeature snmp
35       {
36          Name = 'SNMP-Service'
37       }
38       RoleConfiguration MyServerRoles
39       {
40          Roles = $Node.Role
41          DependsOn = '[WindowsFeature]snmp'
42       }
43    }
44 }
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

Answer Area

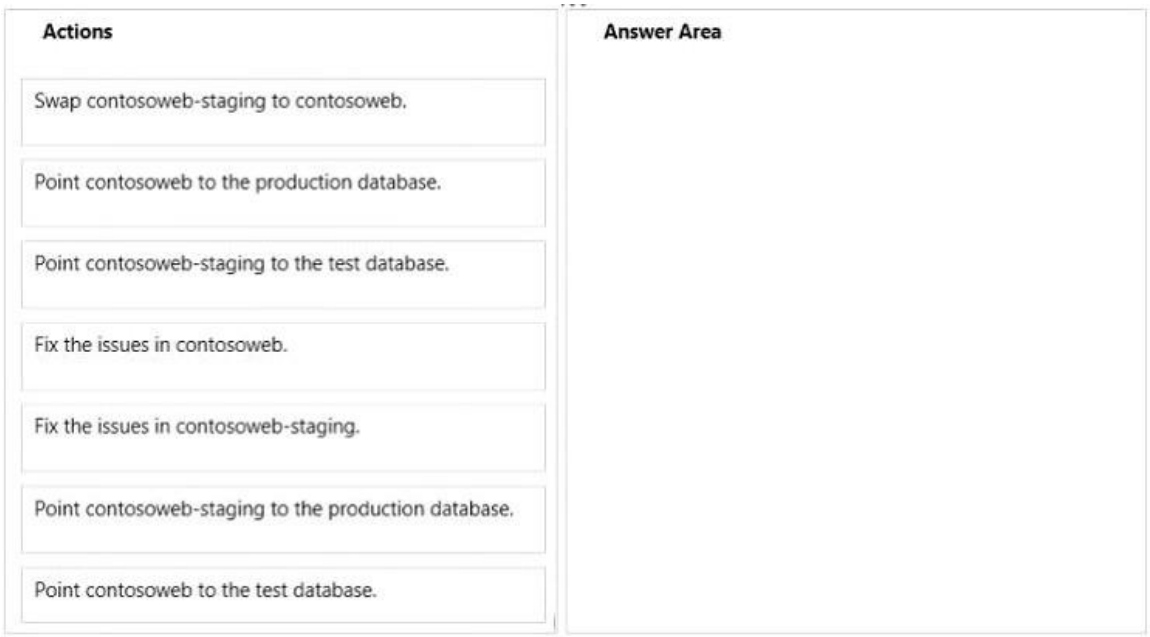
	Yes	No
The script configures SNMP service on all servers.	○	○
The script configures the Web Server (IIS) role on Server3.	○	○
Invoking the script within Windows PowerShell applies the desired state to all servers.	○	○

Answer:

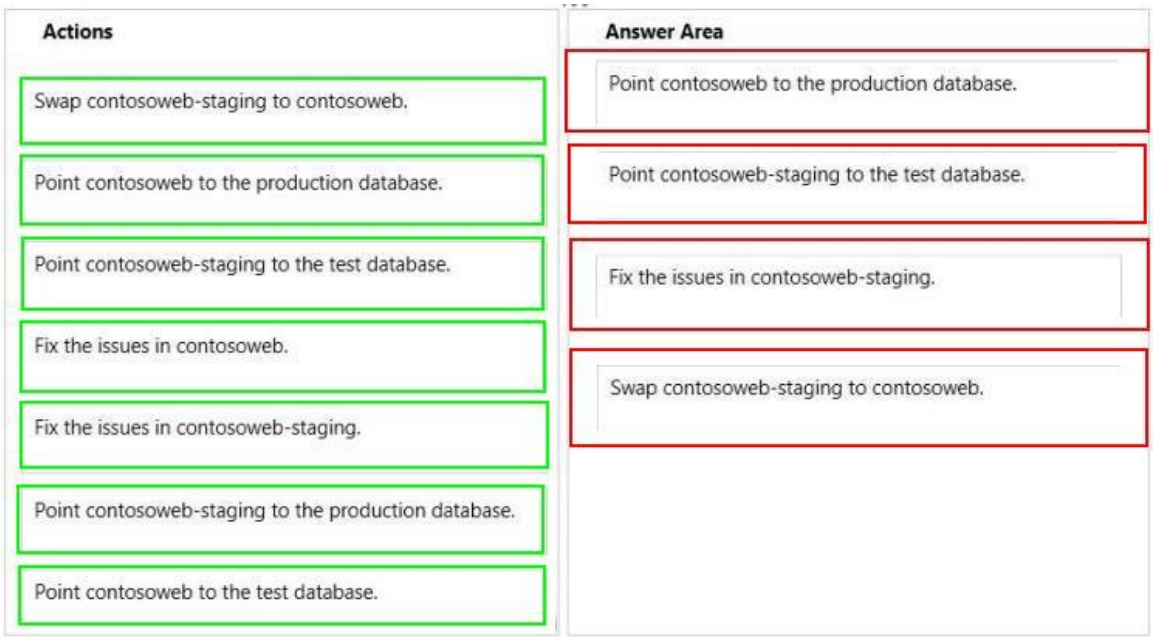
Answer Area

	Yes	No
The script configures SNMP service on all servers.	○	○
The script configures the Web Server (IIS) role on Server3.	○	○
Invoking the script within Windows PowerShell applies the desired state to all servers.	○	○

QUESTION 125
Drag and Drop Question
You administer an Azure Web Site named contosoweb that uses a production database.
You deploy changes to contosoweb from a deployment slot named contosoweb-staging.
You discover issues in contosoweb that are affecting customer data.
You need to resolve the issues in contosoweb while ensuring minimum downtime for users.
You swap contosoweb to contosoweb-staging.
Which four steps should you perform next in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



Answer:



QUESTION 126
Your company has two physical locations configured in a geo-clustered environment that includes:

- System Center Virtual Machine Manager 2012 R2
- System Center Data Protection Manager 2012 R2
- SQL Server 2012
- Windows Server 2012 R2 Hyper-V
- Over 100 virtual machines (VMs) in each physical location

Your company has recently signed up for Azure.
You plan to leverage your current network environment to provide a backup solution for your VMs.
You need to recommend a solution that ensures all VMs are redundant and deployable between locations.
You also want the solution to minimize downtime in the event of an outage at either physical location.
Which solution should you recommend?

A. Configure a backup vault in Azure and use Data Protection Manager to back up the Windows Servers.
B. Use Data Protection Manager and back up the VMs in each location.
C. Use Azure site recovery in an on-premises to Azure protection configuration.
D. Use Azure site recovery in an on-premises to on-premises protection configuration.

Answer: D
Explanation:
On-Premises to On-Premises (Hyper-V replication)
* Cloud metadata is sent to Azure Site Recovery. Replicated data is stored in location specified on target Hyper-V server.
* Azure account with Azure Site Recovery enabled.
* Virtual machines replicate from source on-premises Hyper-V server to another. You can set up reverse replication to replicate back to the source location.
* Requires source and target VMM servers with at least one cloud on each, or a single VMM server with two clouds. Clouds must contain at least one Hyper-V host server or cluster.

QUESTION 127
Hotspot Question
You manage two cloud services named Service1 and Service2.
The development team updates the code for each application and notifies you that the services are packaged and ready for deployment.

Name	Deployment requirements
Service1	• You must be able to re-deploy the service using a previous package. • The package must be retained for disaster recovery purposes.
Service2	• Maintaining the existing service package is not required.

Each cloud service has specific requirements for deployment according to the following table.
In the table below, identify the deployment method for each service. Make only one selection in each column.

Answer Area

Deployment method	Service1	Service2
Manually update DLL on cloud service by means of RDP.	○	○
Update by using package in Azure Storage.	○	○
Update by using package from your local computer.	○	○

Answer:

Answer Area

Deployment method	Service1	Service2
Manually update DLL on cloud service by means of RDP.	○	○
Update by using package in Azure Storage.	○	◉
Update by using package from your local computer.	◉	○

QUESTION 128
You administer a virtual machine (VM) that is deployed to Azure.
You configure a rule to generate an alert when the average availability of a web service on your VM drops below 95 percent for 15 minutes.
The development team schedules a one-hour maintenance period.
You have the following requirements:

```
- No alerts are created during the maintenance period.
- Alerts can be restored when the maintenance is complete.
```

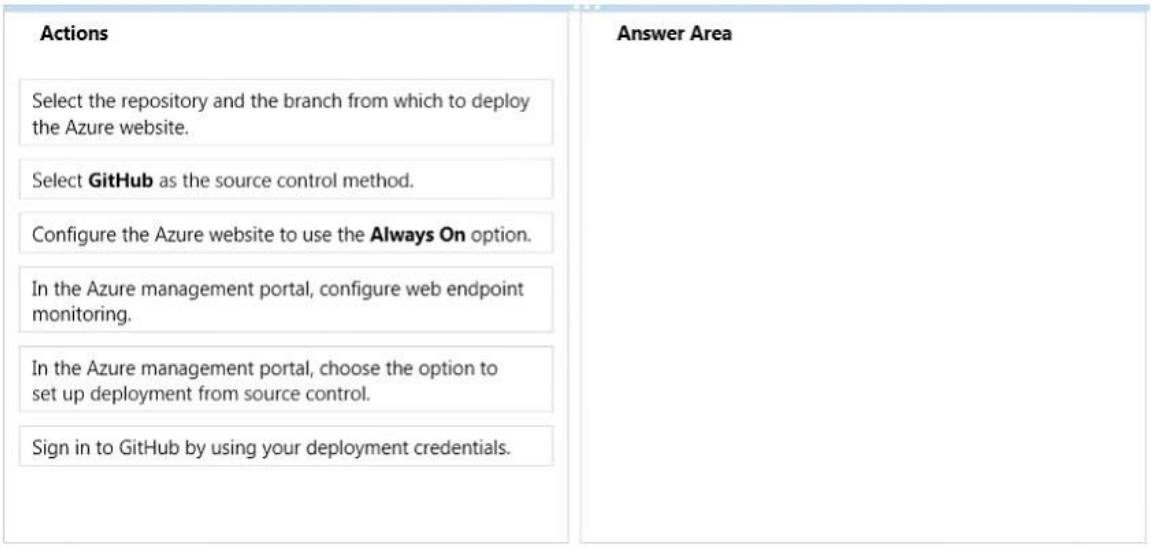
You want to achieve this goal by using the least amount of administrative effort.
What should you do from the Management Portal?

A. Select and disable the rule from the Dashboard page of the virtual machine.
B. Select and delete the rule from the Configure page of the virtual machine.
C. Select and disable the rule from the Monitor page of the virtual machine.
D. Select and disable the rule on the Configure page of the virtual machine.

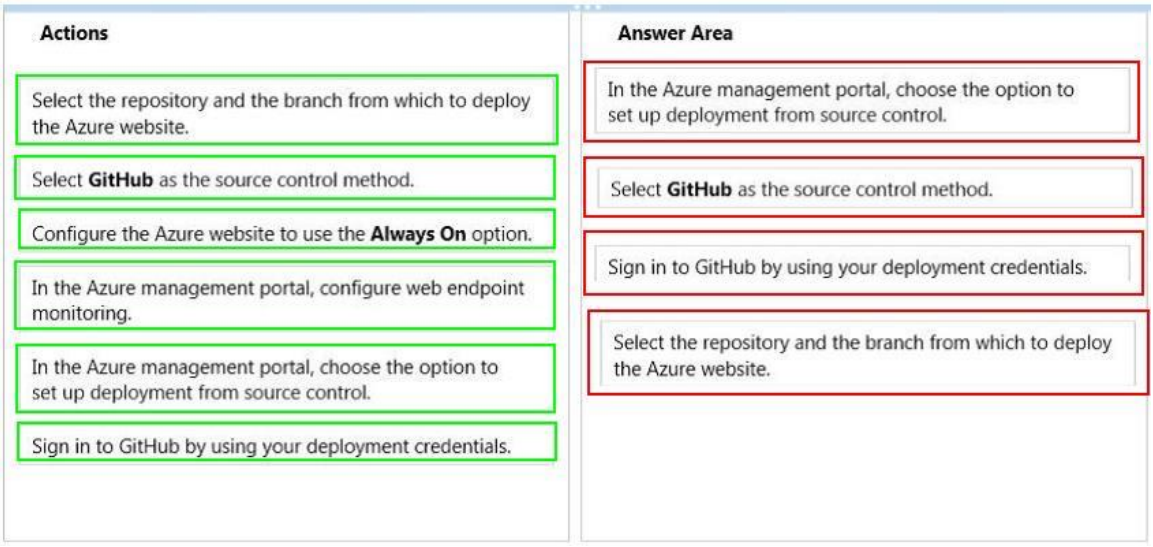
Answer: C
Explanation:
* Example:

* Virtual Machines
You can configure virtual machine alert rules on:
/ Monitoring metrics from the virtual machine host operating system
/ Web endpoint status metrics

QUESTION 129
Drag and Drop Question
You create a web application.
You publish the source code of the web application to a GitHub repository by using Microsoft Visual Studio.
You create a website by using the Azure management portal.
You must continuously deploy the web application from the GitHub repository website to the Azure website.
You need to deploy the source code of the web application.
Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



Answer:



QUESTION 130
Hotspot Question
You manage an Azure subscription.
You develop a storage plan with the following requirements:

```
- Database backup files that are generated once per year are retained
for ten years.
- High performance system telemetry logs are created constantly and
processed for analysis every month.
```

In the table below, identify the storage redundancy type that must be used. Make only one selection in each column.

Redundancy	DB Backups	Telemetry Logs
Locally redundant storage (LRS)	○	○
Zone-redundant storage (ZRS)	○	○
Geo-redundant storage (GRS)	○	○
Read-access geo-redundant storage (RA-GRS)	○	○

Answer:

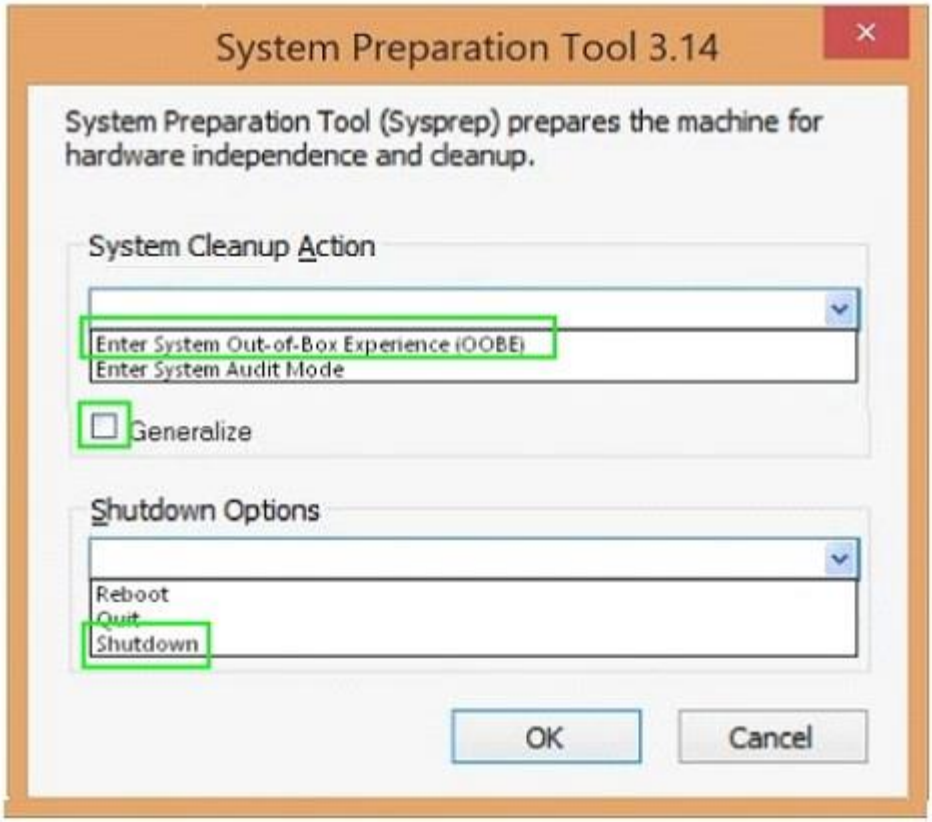
Redundancy	DB Backups	Telemetry Logs
Locally redundant storage (LRS)	○	●
Zone-redundant storage (ZRS)	○	○
Geo-redundant storage (GRS)	●	○
Read-access geo-redundant storage (RA-GRS)	○	○

QUESTION 131
Hotspot Question
You have an existing server that runs Windows Server.
You plan to create a base image of this server.
You will use this base image to prepare several virtual servers for future use.
After the base image is prepared, you will capture it by using the Azure management portal.
You must use the System Preparation Tool (Sysprep) to prepare the server so that the base image can be captured.
You need to prepare the server so that the base image can be captured.
What should you do? To answer, configure the appropriate options in the dialog box in the answer area.

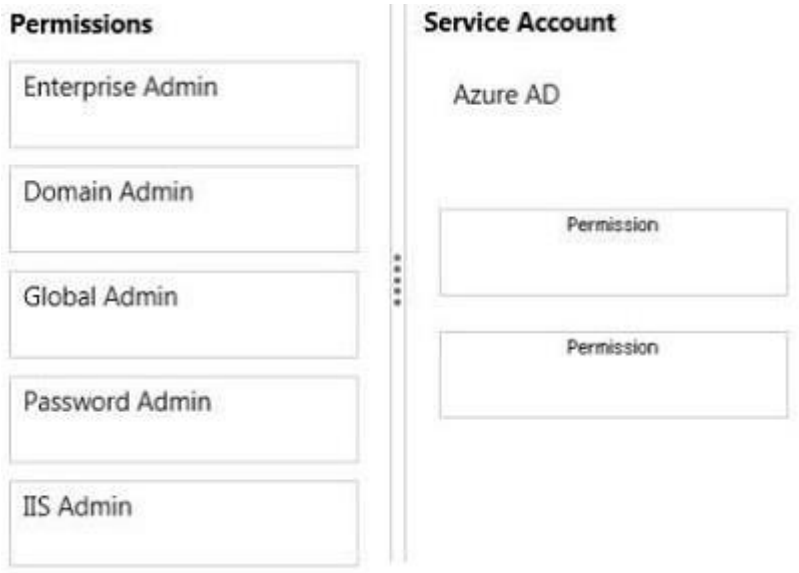
System Preparation Tool dialog box

Answer:

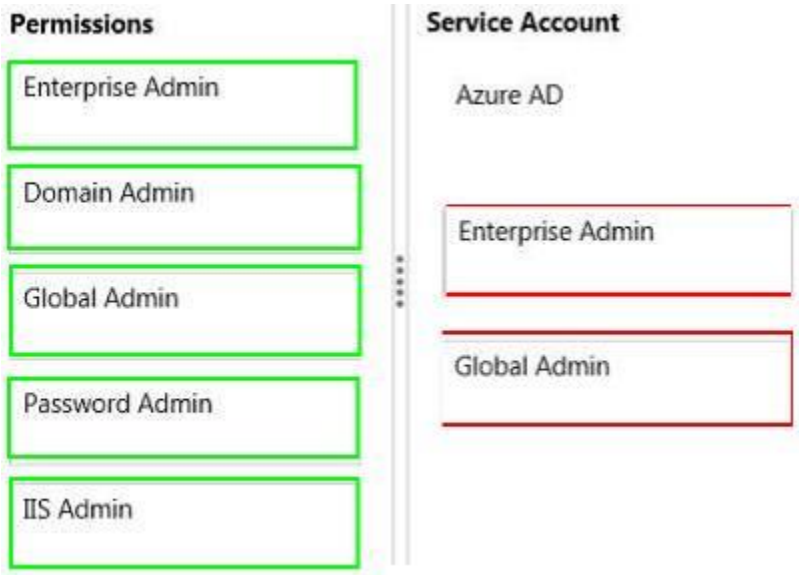
System Preparation Tool dialog box



QUESTION 132
Drag and Drop Question
Your company network includes a single forest with multiple domains.
You plan to migrate from On-Premises Exchange to Exchange Online.
You want to provision the On-Premises Windows Active Directory (AD) and Azure Active Directory (Azure AD) service accounts.
You need to set the required permissions for the Azure AD service account.
Which settings should you use? To answer, drag the appropriate permission to the service account. Each permission may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.



Answer:



QUESTION 133
You manage a cloud service that utilizes an Azure Service Bus queue.
You need to ensure that messages that are never consumed are retained.
What should you do?

A. Check the MOVE TO THE DEAD-LETTER SUBQUEUE option for Expired Messages in the Azure Portal.
B. From the Azure Management Portal, create a new queue and name it Dead-Letter.
C. Execute the Set-AzureServiceBus PowerShell cmdlet.
D. Execute the New-AzureSchedulerStorageQueueJob PowerShell cmdlet.

Answer: A

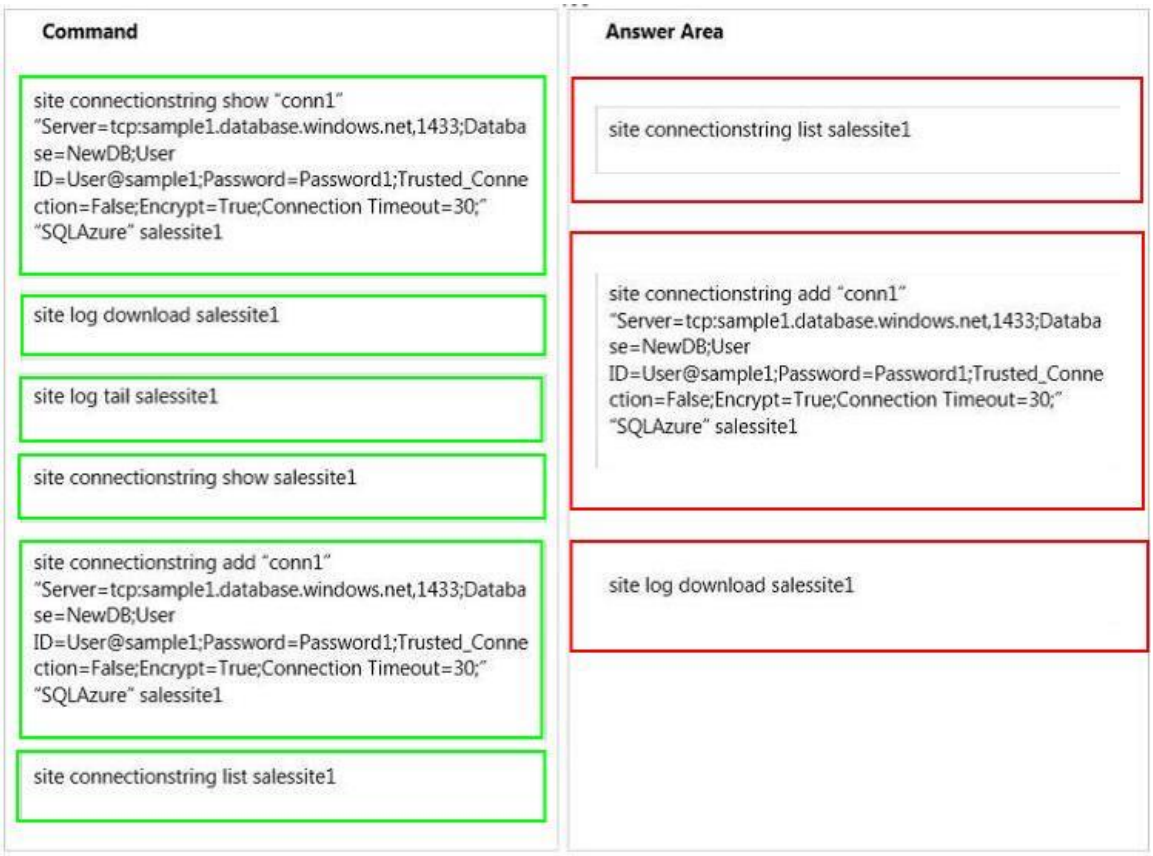
Explanation:
The EnableDeadLetteringOnMessageExpiration property allows to enable\disable the dead-lettering on message expiration.

QUESTION 134
Drag and Drop Question
You manage an Azure Web Site named salessite1.
You notice some performance issues with salessite1.
You create a new database for salessite1.
You need to update salessite1 with the following changes, in the order shown:

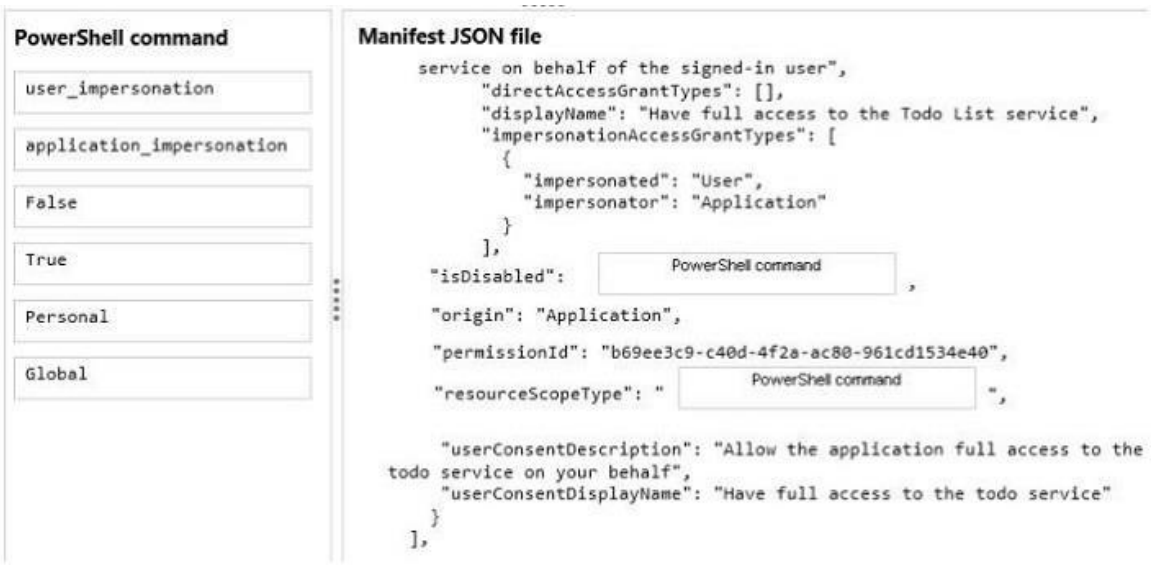
1. Display the list of current connection strings.
2. Create a new connection string named conn1 with a value of: Server=tcp:samplel.database.windows.net,1433;Database=NewDB;User ID=User@samplel;Password=Passwordl;Trusted_Connection=False;Encrypt=True;Connec tion Timeout=30;.
3. Download the application logs for analysis.

Which three xplat-cli commands should you perform in sequence? To answer, move the appropriate commands from the list of commands to the answer area and arrange them in the correct order.

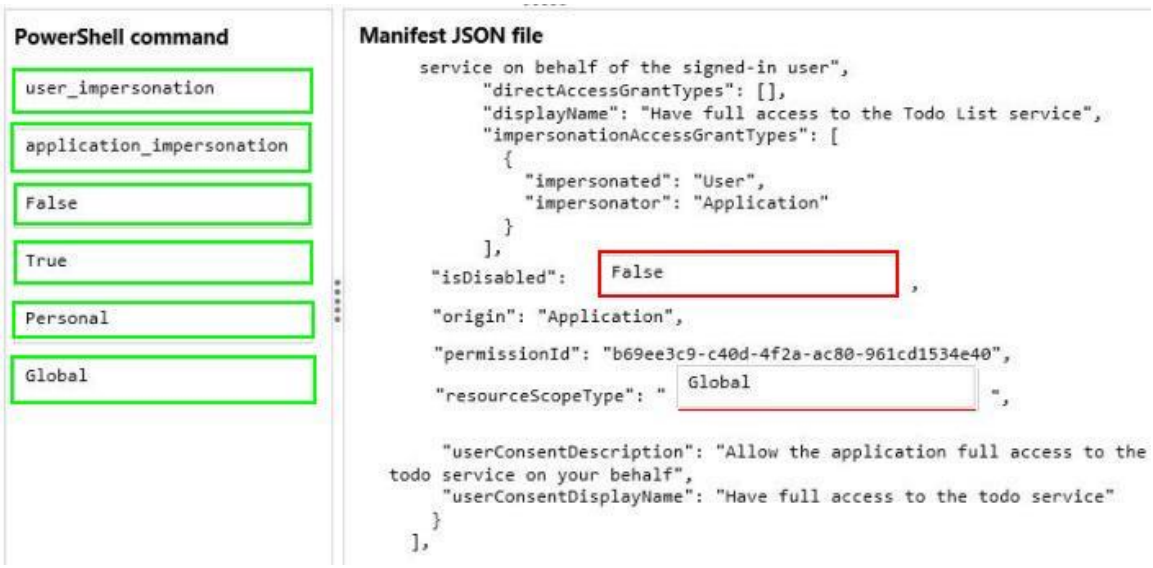
Answer:



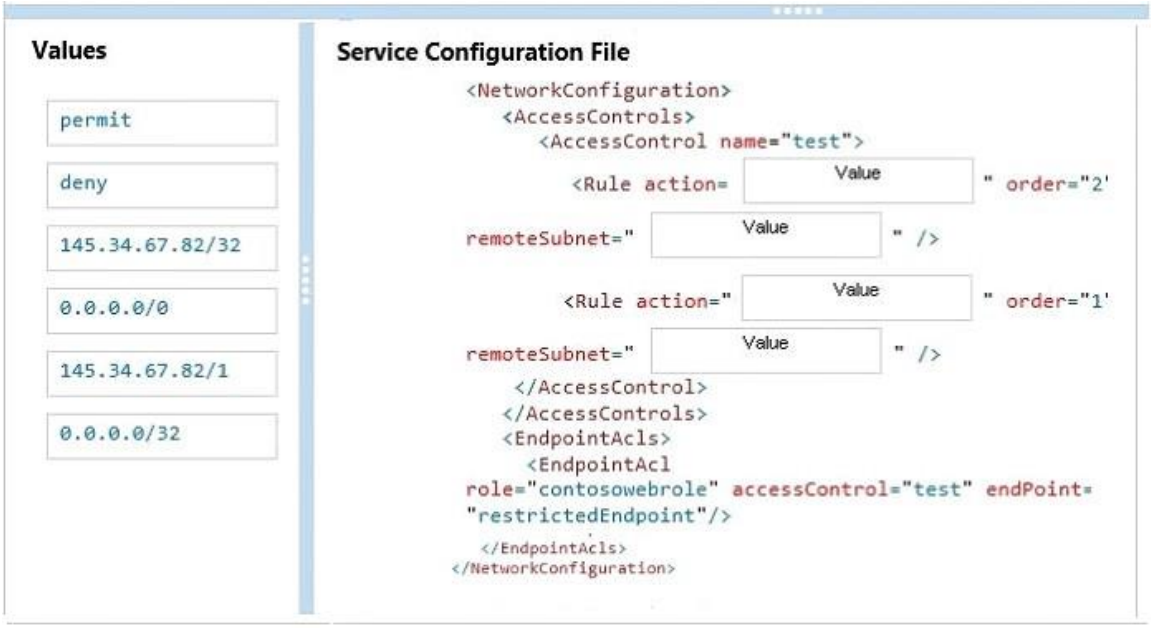
QUESTION 135
Drag and Drop Question
You publish a multi-tenant application named MyApp to Azure Active Directory (Azure AD).
You need to ensure that only directory administrators from the other organizations can access MyApp's web API.
How should you configure MyApp's manifest JSON file? To answer, drag the appropriate PowerShell command to the correct location in the application's manifest JSON file. Each value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.



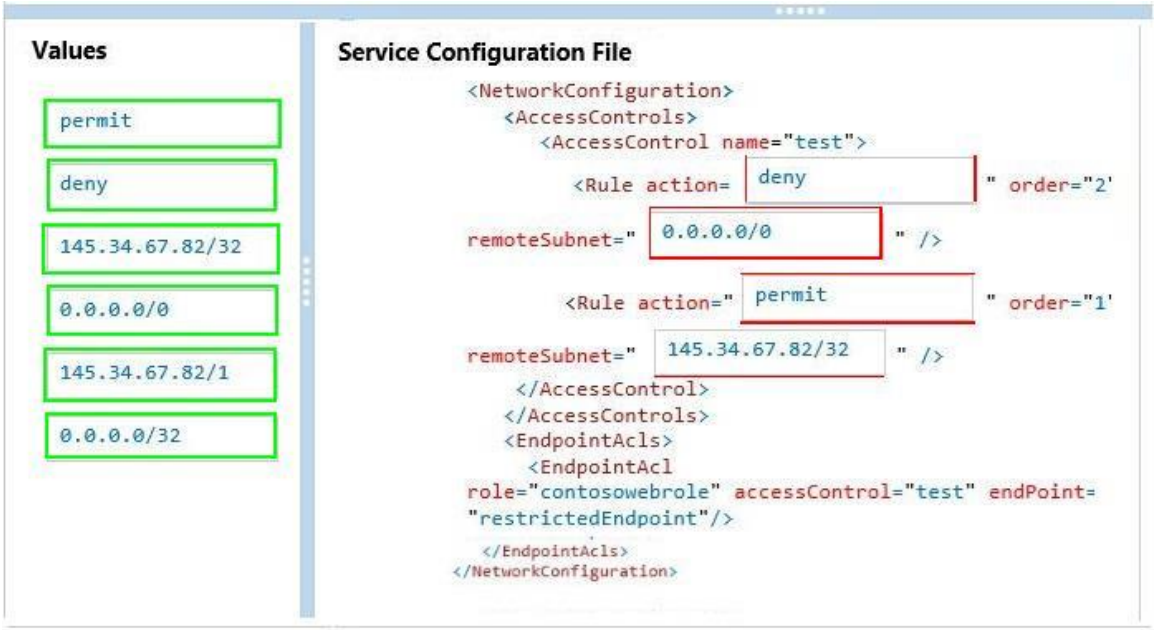
Answer:



QUESTION 136
Drag and Drop Question
You plan to deploy a cloud service named contosoapp. The service includes a web role named contosowebrole. The web role has an endpoint named restrictedEndpoint.
You need to allow access to restricted Endpoint only from your office machine using the IP address 145.34.67.82.
Which values should you use within the service configuration file? To answer, drag the appropriate value to the correct location in the service configuration file. Each value may be used once, more than once, or not at all.
You may need to drag the split bar between panes or scroll to view content.

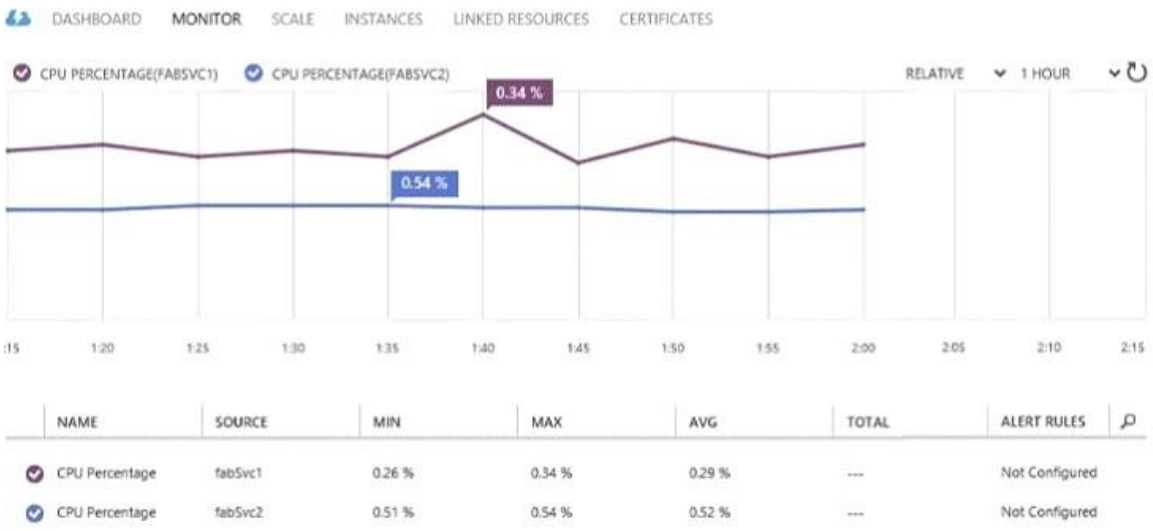


Answer:

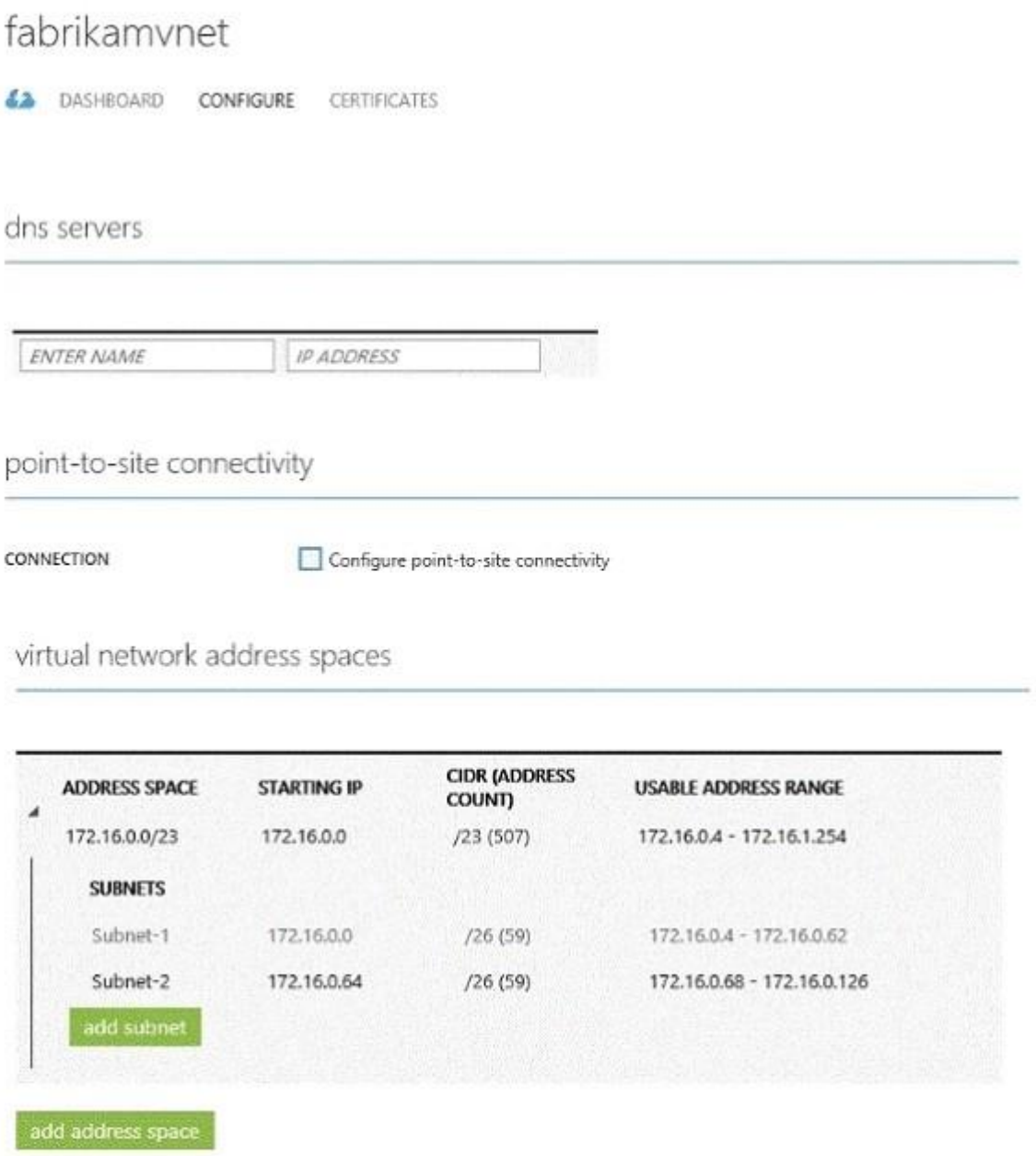


QUESTION 137
Drag and Drop Question
You administer two virtual machines (VMs) that are deployed to a cloud service.
The VMs are part of a virtual network.
The cloud service monitor and virtual network configuration are configured as shown in the exhibits. (Click the Exhibits button.)

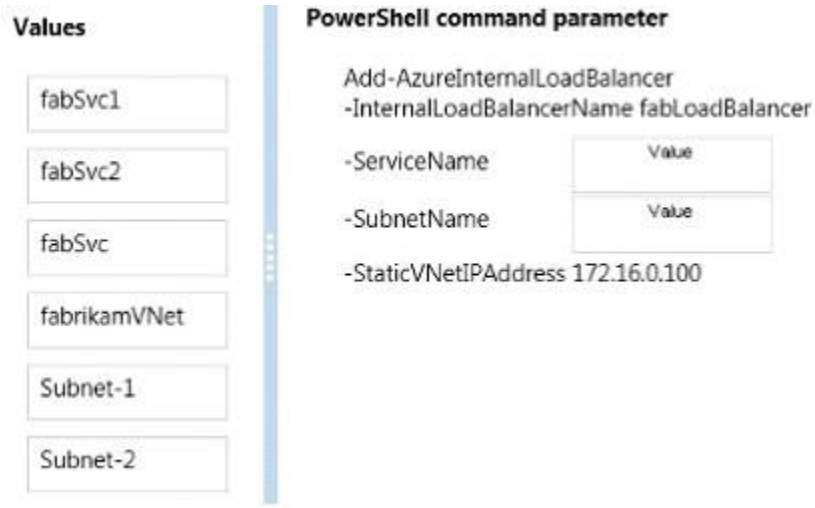
fabsvc



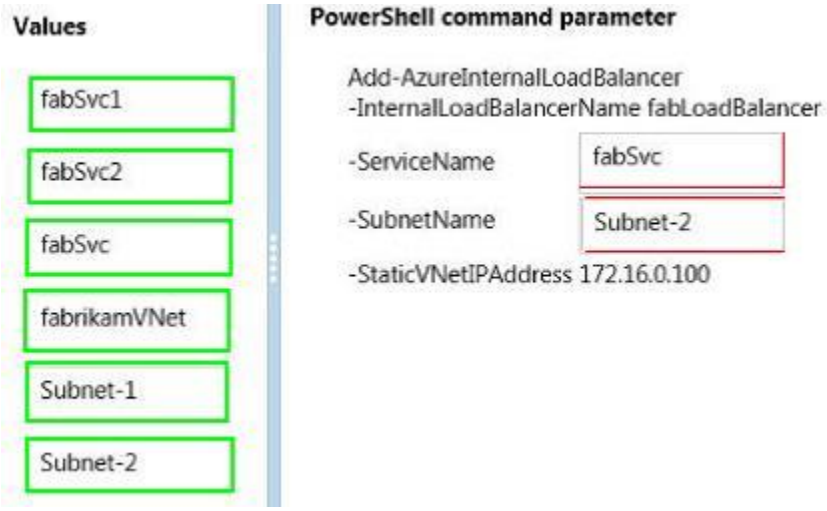
NAME	SOURCE	MIN	MAX	AVG	TOTAL	ALERT RULES
CPU Percentage	fabSvc1	0.26 %	0.34 %	0.29 %	---	Not Configured
CPU Percentage	fabSvc2	0.51 %	0.54 %	0.52 %	---	Not Configured



You need to create an internal load balancer named fabLoadBalancer that has a static IP address of 172.16.0.100.
Which value should you use in each parameter of the Power Shell command?
To answer, drag the appropriate value to the correct location in the Power Shell command. Each value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.



Answer:



QUESTION 138
You manage a set of virtual machines (VMs) deployed to the cloud service named fabrikamVM.
You configure auto scaling according to the following parameters:

```
- With an instance range of two to six instances
- To maintain CPU usage between 70 and 80 percent
- To scale up one instance at a time
- With a scale up wait time of 30 minutes
- To scale down one instance at a time
- With a scale down wait time of 30 minutes
```

You discover the following usage pattern of a specific application:
The application peaks very quickly, and the peak lasts for several hours.
CPU usage stays above 90 percent for the first 1 to 1.5 hours after usage increases.
After 1.5 hours, the CPU usage falls to about 75 percent until application usage begins to decline.
You need to modify the auto scaling configuration to scale up faster when usage peaks.
What are two possible ways to achieve this goal? Each correct answer presents a complete solution.

A. Decrease the scale down wait time.
B. Decrease the scale up wait time.
C. Increase the number of scale up instances.
D. Increase the scale up wait time.
E. Increase the maximum number of instances.

Answer: BC

QUESTION 139
You manage a cloud service that has a web role named fabWeb.
You create a virtual network named fabVNet that has two subnets defined as Web and Apps.
You need to be able to deploy fabWeb into the Web subnet.
What should you do?

A. Modify the service definition (csdef) for the cloud service.
B. Run the Set-AzureSubnet PowerShell cmdlet.
C. Run the Set-AzureVNetConfig PowerShell cmdlet.
D. Modify the network configuration file.
E. Modify the service configuration (cscfg) for the fabWeb web role.

Answer: A
Explanation:
Azure Service Definition Schema (.csdef File)
The service definition file defines the service model for an application. The file contains the definitions for the roles that are available to a cloud service, specifies the service endpoints, and establishes configuration settings for the service.

QUESTION 140
You administer an Azure Active Directory (Azure AD) tenant where Box is configured for:

```
- Application Access
- Password Single Sign-on
```

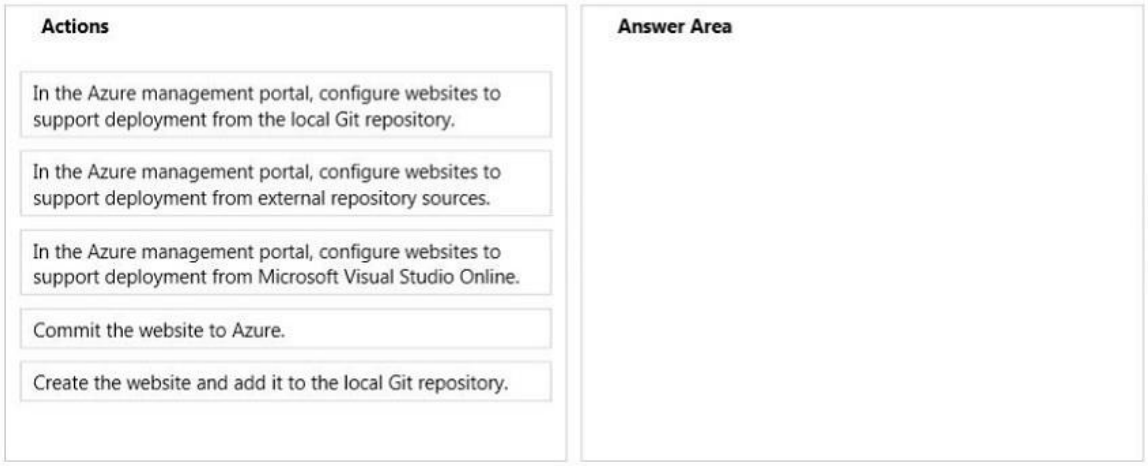
An employee moves to an organizational unit that does not require access to Box through the Access Panel.
You need to remove only Box from the list of applications only for this user.
What should you do?

A. Delete the user from the Azure AD tenant.
B. Delete the Box Application definition from the Azure AD tenant.
C. From the Management Portal, remove the user's assignment to the application.
D. Disable the user's account in Windows AD.

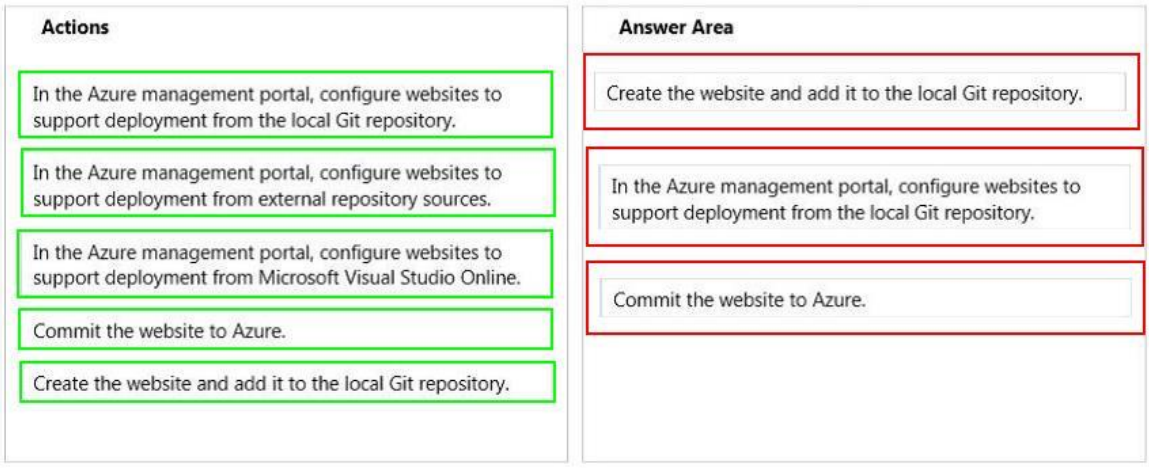
Answer: C
Explanation:
Note: Use Azure AD to manage user access, provision user accounts, and enable single sign-on with Box. Requires an existing Box subscription.

QUESTION 141
Drag and Drop Question

Your team uses a proprietary source control product.
You use FTP to manually deploy an Azure website.
You must move your source code from the proprietary source control product to a secure on-premises Git versioning system. Instead of deploying the website by using FTP, the website must automatically deploy to Azure each time developers check-in source files.
You need to implement the new deployment strategy.
Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



Answer:



QUESTION 142
You administer an Azure Storage account named contoso storage.
The account has queue containers with logging enabled.
You need to view all log files generated during the month of July 2014.
Which URL should you use to access the list?

A. http://contosostorage.queue.core.windows.net/$logs?restype=container&comp=list&prefix=queue/2014/07
B. http://contosostorage.queue.core.windows.net/$files?restype=container&comp=list&prefix=queue/2014/07
C. http://contosostorage.blob.core.windows.net/$files?

restype=container&comp=list&prefix=blob/2014/07

D. http://contosostorage.blob.core.windows.net/$logs?
restype=container&comp=list&prefix=blob/2014/07

Answer: D
Explanation: All logs are stored in block blobs in a container named $logs, which is automatically created when Storage Analytics is enabled for a storage account.
The$logs container is located in the blob namespace of the storage account, for example: http://<accountname>.blob.core.windows.net/$logs. This container cannot be deleted once Storage Analytics has been enabled, though its contents can be deleted.
Note: Each log will be written in the following format:
<service-name>/YYYY/MM/DD/hhmm/<counter>.log
http://msdn.microsoft.com/library/azure/hh343262.aspx

QUESTION 143
You have an on-premises data center and an Azure subscription.
The Azure subscription has services that are hosted in the East US region.
You have servers that run Windows Server 2012 R2.
The servers are located on-premises and in both Azure regions.
You plan to deploy Microsoft System Center 2012 R2 Data Protection Manager (DPM) to protect all of the servers. The DPM deployment has the following requirements:

```
- Centralize the management of all backups.
- Minimize the costs associated with bandwidth usage
- Protect Microsoft SharePoint and Microsoft SQL Server workloads for
up to nine years
```

You need to recommend which components must be configured to support the planned deployment.
What should you include in the recommendation? To answer, select the appropriate options in the answer area.

ANSWER AREA

Number of DPM servers: 0-3?
Number of Azure backup vaults: 0-2?

Answer:

Number of DPM servers: 1
Number of Azure backup vaults: 2

QUESTION 144
You have an Azure subscription.
You need to recommend a solution to automate the configuration of virtual machine to meet the following requirements:

```
- Manage 30 virtual machines that run Linux by using Chef.
- Ensure that 10 virtual machines that run Windows Server 2012 R2 are
turned off outside of business hours.
```

What should you include in the recommendation? To answer, select the appropriate options in the answer area.

ANSWER AREA

To manage the Linux virtual machine:

Cookbooks
Runbooks
Windows PowerShell Desired State Configuration (DSC)

To turn off the Windows Server 2012 R2 virtual machine:

Azure Automation
Azure Management Services
Windows PowerShell Desired State Configuration (DSC)

Answer:

To manage the Linux virtual machine:

Cookbooks
Runbooks
Windows PowerShell Desired State Configuration (DSC)

To turn off the Windows Server 2012 R2 virtual machine:

Azure Automation
Azure Management Services
Windows PowerShell Desired State Configuration (DSC)

QUESTION 145
You work for a company named Contoso, Ltd.
The network contains an on premises Active Directory domain that has Active Directory Federation Services (AD FS). Contoso uses an internally developed claims ... App1.
You implement directory synchronization with Azure Active Directory (Azure AD).
You need to recommend which configuration should be performed to... Single-Sign-On to App1 to...authenticated by Azure AD.
Which two configuration should you include in the recommendation?..

A. Azure AD as claims provided trust
B. App1 as a claims provide
C. Azure AD as relying party trust
D. App1 as relying party trust

Answer: B

QUESTION 146
Your company plans to migrate its on-premises Microsoft SQL Server databases to Azure.
You are considering using SQL Server 2014 on Azure virtual machines and Azure SQL Database. The planned migration must support the following data security features:

```
- Database-level firewall rules
- Dynamic Data Masking
```

- Transparent data encryption (TDE)

You need to identify the data security features supported by each product.

ANSWER AREA

Database-level firewall rules:	Only Azure SQL Database Only SQL Server 2014 on the Azure the virtual machines Both
Dynamic Data Masking:	Only Azure SQL Database Only SQL Server 2014 on the Azure the virtual machines Both
Transparent data encryption (TDE):	Only Azure SQL Database Only SQL Server 2014 on the Azure the virtual machines Both

Answer:

Database-level firewall rules:	Only Azure SQL Database Only SQL Server 2014 on the Azure the virtual machines Both
Dynamic Data Masking:	Only Azure SQL Database Only SQL Server 2014 on the Azure the virtual machines Both
Transparent data encryption (TDE):	Only Azure SQL Database Only SQL Server 2014 on the Azure the virtual machines Both

QUESTION 147
You need to recommend the appropriate strategy for the data mining application.
What should you recommend?

A. Configure multiple on-premises cluster that runs multiple Azure virtual machines to connect by using an Azure virtual private network (VPN)

B. Configure an on-premises cluster that runs multiple Azure virtual machines that is located in the central office.
C. Configure a cluster of high-performance computing virtual machines (VMs) that use the largest number of cores. Ensure that the VMs are instantiated in different Azure datacenters that are distributed across the same affinity group.
D. Configure a cluster of high-performance computing virtual machines (VMs) that use the largest number of cores. Ensure that the VMs are instantiated in the same Azure datacenter.

Answer: B

QUESTION 148
You need to recommend an appropriate solution for the data mining requirements. Which solution should you recommend?

A. Use Azure Batch to schedule jobs and automate scaling of virtual machines
B. Use Traffic Manager to allocate tasks to multiple virtual machines and use the Azure Portal to spin up new virtual machines as needed.
C. Design a schedule process that allocates tasks to multiple virtual machines and use the Azure Portal to create new VMs as needed.
D. Use Microsoft HPC Pack on-premises to schedule jobs and automate scaling of virtual machines in Azure.

Answer: A

QUESTION 149
You need to encrypt a media file. Which type of encryption should you use?

A. Secure token service
B. PlayReady
C. Storage
D. Envelope

Answer: B

QUESTION 150
You need to architect a solution for the client's core business objectives. Which services should you recommend? To answer, drag the appropriate service to the correct business objective.
Each service may be used once, more than once, or not at all.
You may need to drag the split bar between panes or scroll to view content.

SERVICES

Azure Batch
Azure Media Services
HPC Pack
SQL Service Analysis Services
Application Insights
Mobile Services

ANSWER AREA

Objective	Service
..Video and audio	
...in the web application	
Data Mining	

Answer:

SERVICES

Azure Batch
Azure Media Services
HPC Pack
SQL Service Analysis Services
Application Insights
Mobile Services

ANSWER AREA

Objective	Service
..Video and audio	Azure Media Services
...in the web application	Mobile Services
Data Mining	Application Insights

QUESTION 151
You need to select the appropriate solution for monitoring the.NET application.
What should you recommend?

A. Microsoft Analytics Platform
B. Application Insights
C. Visual Studio IntelliTrace
D. Data Factory

Answer: B

QUESTION 152
You need to configure the deployment of the storage analysis application. What should you do?

A. Turn on continuous integration
B. Configure the deployment from secure control
C. Add a new deployment slot
D. Create a new Mobile Service.

Answer: A

QUESTION 153
You need to upload video to the company's Azure environment.

A. Write directly to the storage REST APIs
B. Use the Azure Import/Export service to move the data
C. Create an ExpressRoute connection
D. Create a site-to VPN connection.

Answer: A

QUESTION 154
You need to ensure that the customer-facing website meets the scaling and deployment requirements. What should you do?

A. Use Traffic Manager with load balancing enabled. Deploy websites in a single region
B. Use Traffic Manager with load balancing enabled. Deploy web apps in multiple regions that are nearest to the website visitor populations.
C. Implement operational procedures to quickly deploy additional local instances of the web apps when you are notified by Traffic Manager.
D. Deploy and maintain multiple web app instances in the largest Azure datacenters in North America, Europe, and Asia.

Answer: B

QUESTION 155
You need to recommend a solution for publishing one of the company websites to Azure and configuring it for remote debugging.
Which two actions should you perform? Each correct answer presents part of the solution.

A. Set the application logging level to Verbose and enable logging.
B. Set the Web Server logging level to Information and enable logging.
C. From Virtual Studio, configure the site to enable Debugger Attaching and then publish the site.
D. Set the Web Server logging level to Verbose and enable logging.
E. From Visual Studio, attach the debugger to the solution.

Answer: AE

QUESTION 156
You need to recommend a data storage solution that meets the business continuity requirements.
Which two features should you recommend? Each correct answer presents part of the solution

A. SQL Database Standard
B. Azure Backup
C. SQL Database Premium
D. Azure Virtual Machines

Answer: AB

QUESTION 157
You need to configure availability for the virtual machines that the company is migrating to Azure.
What should you implement?

A. Cloud Services
B. Availability Sets
C. Virtual Machine Autoscaling
D. Traffic Manager

Answer: B

QUESTION 158
You need to configure the Northwind website. Which two solutions you use? Each correct answer presents part of the solution.

A. Use Azure Zone Redundant Storage to provide redundancy across Azure global data center.
B. Deploy the Northwind site in an Azure web app
C. Configure a hybrid connection to the database.
D. Implement Azure ExpressRoure to increase the bandwidth for users of the Northwind public website.
E. Create Azure virtual machines that run Windows and Linux servers in Azure data Centers.

Answer: AB

QUESTION 159
You need to design the authentication solution to the NorthRide app.
Which solution should you use?

A. Active Directory Domain Services with multi-factor authentication
B. Azure Active Directory Premium and add multi-factor authentication for cloud users.
C. Azure Active Directory Basic with multi-factor authentication for the cloud and on- premises users.
D. Active Directory Domain Services with mutual authentication.

Answer: B

QUESTION 160
You need to design the mobile service storage architecture for NorthRideFinder. Which solutions should you recommend? To answer, select the appropriate solutions in the answer area.

Objective	Service
Add users	Custom table Insert operation
	Custom table Read operation
	Custom BLOB Insert operation
	Custom BLOB Read operation
Access profile data	Custom table Insert operation
	Custom table Read operation
	Custom BLOB Insert operation
	Custom BLOB Read operation

Answer:

Objective	Service
Add users	Custom table Insert operation
	Custom table Read operation
	Custom BLOB Insert operation
	Custom BLOB Read operation
Access profile data	Custom table Insert operation
	Custom table Read operation
	Custom BLOB Insert operation
	Custom BLOB Read operation

Objective	Service
Add users	Custom table Insert operation
	Custom table Read operation
	Custom BLOB Insert operation
	Custom BLOB Read operation
Access profile data	Custom table Insert operation
	Custom table Read operation
	Custom BLOB Insert operation
	Custom BLOB Read operation

QUESTION 161
You need to recommend the steps required to deploy the Northwind Electric Cars website. Which three actions should you recommend performing in sequences? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

ACTIONS	ANSWER AREA
Scale the WebJob separately from the websites to spread web traffic loads.	
Publish a frontend site to an Azure web app, and publish a WebJob backend to a separate Azure web app.	
Publish an application with a WebJob backend to an Azure web app.	
Create an Azure storage account.	
Schedule the WebJob to run at non-peak times.	

Answer:

ACTIONS	ANSWER AREA
Scale the WebJob separately from the websites to spread web traffic loads.	Scale the WebJob separately from the websites to spread web traffic loads.
Publish a frontend site to an Azure web app, and publish a WebJob backend to a separate Azure web app.	Publish a frontend site to an Azure web app, and publish a WebJob backend to a separate Azure web app.
Publish an application with a WebJob backend to an Azure web app.	Publish an application with a WebJob backend to an Azure web app.
Create an Azure storage account.	Schedule the WebJob to run at non-peak times.
Schedule the WebJob to run at non-peak times.	

QUESTION 162
You need to set up the traffic prediction system. Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

ACTIONS	ANSWER AREA
Create a machine learning workspace.	
Create a new experiment that uses an algorithm to predict future customer demand.	
Train and evaluate data models.	
Create a new experiment that uses an algorithm to minimize driving time.	
Upload historical employee timesheet data.	
Upload Historical customer pickup data.	

Answer:

ACTIONS	ANSWER AREA
Create a machine learning workspace.	Create a machine learning workspace.
Create a new experiment that uses an algorithm to predict future customer demand.	Create a new experiment that uses an algorithm to predict future customer demand.
Train and evaluate data models.	Upload historical employee timesheet data.
Create a new experiment that uses an algorithm to minimize driving time.	Upload Historical customer pickup data.
Upload historical employee timesheet data.	Train and evaluate data models
Upload Historical customer pickup data.	

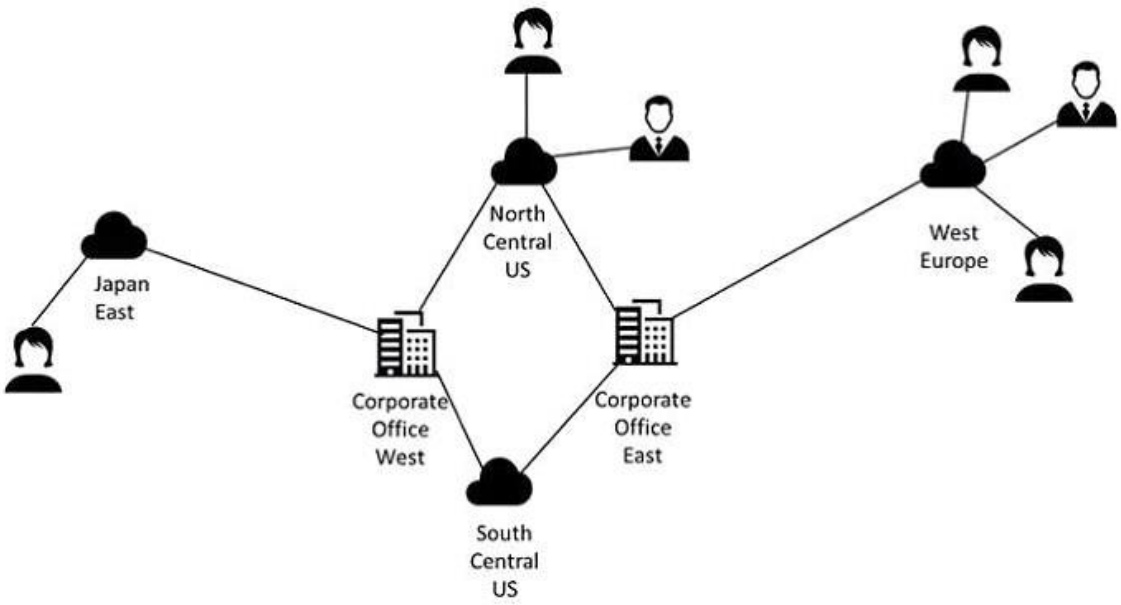
QUESTION 163
You need to provide a data access solution for the NorthRide app.
Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

ACTIONS	ANSWER AREA
Configure Service Bus Queue.	
Create a service namespace under Service Bus.	
Obtain the default management credentials for the namespace.	
Configure the Service Bus to consume a web service.	
Configure the application to use Service Bus Relay.	

Answer:

ACTIONS	ANSWER AREA
Configure Service Bus Queue.	Create a service namespace under Service Bus.
Create a service namespace under Service Bus.	Configure Service Bus Queue.
Obtain the default management credentials for the namespace.	Configure the Service Bus to consume a web service.
Configure the Service Bus to consume a web service.	Configure the application to use Service Bus Relay.
Configure the application to use Service Bus Relay.	

QUESTION 164
The company has two corporate offices. Customers will access the websites from multiple locations in different geographical locations.



You need to architect the global website strategy to meet the business requirements. Use the dropdown menus to select the answer choice that answers each question.

ANSWER AREA

Where should you deploy the websites?	South Central US
	Corporate Office West and Corporate Office East
	East Asia, North Central US, and West Europe
Where should you store the media?	South Central US
	Corporate Office West and Corporate Office East
	East Asia, North Central US, and West Europe

Answer:

Where should you deploy the websites?	South Central US
	Corporate Office West and Corporate Office East
	East Asia, North Central US, and West Europe
Where should you store the media?	South Central US
	Corporate Office West and Corporate Office East
	East Asia, North Central US, and West Europe

QUESTION 165
You have an Azure subscription. You plan to deploy five VMs that will have similar configurations and will run the same workload. You need to recommend a solution to ensure the availability of the VMs during Azure maintance periods. At any given time, only one virtual machine can be offline for maintenance. Which shoud you include in the recommendation?
To answer, select the appropriate options in the answer area.

ANSWER AREA

Number of cloud services: ?
Number of availability sets: ?
Number of upgrade domains: ?

Answer:
1
1
5

QUESTION 166
You plan to deploy 4 IaaS VMs in Azure. All IaaS VMs will reside on the same IP subnet.
You need to design an Azure virtual network that can accommodate the deployment.
The design must meet the following requirements:

```
- Minimize the size of the IP subnet
- Provide the ability to restrict both internal and Internet Traffic
- Ensure that the IP addresses of the virtual machines remain the same
```

Which should you include in the design? To answer, select the appropriate options in the answer area.

ANSWER AREA

Virtual network subnet mask: ?
Cmdlet to configure IP addresses: ?
Method to restrict traffice: ?

Answer: Pending

QUESTION 167
You have an Azure subscription that contains 10 VMs.
All of the VMs are set to use the Basic VM tier and are located in the West US region.
The storage account used for the VMs is set to Locally Redundant replication.
The VMs are in an availability set.
You plan to deploy several web apps in Azure that will retrieve data from the VMs.
The web apps will use a new App Service plan.
You need to ensure that the web apps remain available if the hardware in a data center fails.
The solution must minimize the Azure costs associated with bandwith utilization.
What should you include in the solution?

A. Set the App Service plan for the web apps to any region other than West US region
B. Create a new storage account that is set to Geo-Redundant replication.
   Move the virtual machines to the new storage account.
   Set the App service plan for the web apps to use the default app service.
C. Set the App Service plan for the web apps to use the default app service.
   Configure ExpressRoute for the Azure subscription.
D. Create a new storage account that is set to Zone Redundant replication.
   Move the virtual machines to the new storage account.
   Set the App Service plan for the web apps to use the default app service.

Answer: D

QUESTION 168
You design an Azure web application. The web application is accessible by default as a standard cloudapp.net URL. You need to recommand DNS resource record types that allow you to configure access to the web application by using a custom domain name.
Which two DNS record types should you recommend?

A. CNAME
B. A
C. SRV
D. MX

Answer: AB

QUESTION 169
You plan to implement a predictive analytics solution in Azure Machine Learning Studio.
You intend to train the solution by using existing data that resides on-premises.
The on-premises data is a collection of delimited text files that total 5GB in size.
You need to identify the process of adding the existing data to the solution.
What should you identify? To answer, select the appropriate options in the answer area.

ANSWER AREA

Upload data into: ? (ML Studio? An Azure SQL Database?)
In ML Studio, create: ? (a DataSet? An experiment?)
In ML Studio, consume data by using the: ? (Add Rows module? Enter Data module? Reader module?)

Answer:
Azure SQL Database
An Experiment
Reader Module

QUESTION 170
You have an Azure subscription named Subscription1.
You create several Azure VMs in Subscription1.
All of the VMs belong to the same virtual network.
You have an on-premises Hyper-V server named Server1.
Server1 hosts a virtual machine named VM1.
You plan to replicate VM1 to Azure.
You need to create additional objects in Subscription1 to support the planned deployment.
Which three objects should you create? Each correct answer presents part of the solution.

A. An Azure Site Recovery vault
B. An endpoint
C. A protection group
D. A Hyper-V site
E. A storage account
F. A Traffic Manager

Answer: AEF

QUESTION 171
Your company has a branch office that has 90 employees.
The computers at the branch office are configured as shown in the following table.

OS	Version	Number of computers
Windows 7 SP1	64-bit	20
Windows 8.1	32-bit	20
Windows 8.1	64-bit	50
Windows Server 2012 R2	64-bit	3

You need to identify a backup method for the computers.
The solution must use Azure Backup whenever possible.
What should you identify? To answer, select the appropriate options in the answer area.

ANSWER AREA

64-bit version of Windows 7 SP1: ? (Azure Backup? Wbadmin?)
32-bit version of Windows 8.1: ? (Azure Backup? Wbadmin?)
64-bit version of Windows 8.1: ? (Azure Backup? Wbadmin?)
64-bit version of Windows Server 2012 R2: ? (Azure Backup? Wbadmin?)

Answer:
64-bit version of Windows 7 SP1: Azure Backup
32-bit version of Windows 8.1: Wbadmin
64-bit version of Windows 8.1: Azure Backup
64-bit version of Windows Server 2012 R2: Azure Backup

QUESTION 172
You need to recommend a business continuity and disater recovery solution for all the existing line of business applications.
What should you recommend?

A. Configure ExpressRoute to enable migration to Azure
B. Migrate the virtual machines to the Hyper-V cluster and enable Hyper-V replica
C. Create new virtual machines in Azure and migrate the line of business application to the VMs. Migrate any backend databases to SQL Database
D. Install the Azure Backup agent on the virtual machines

Answer: B